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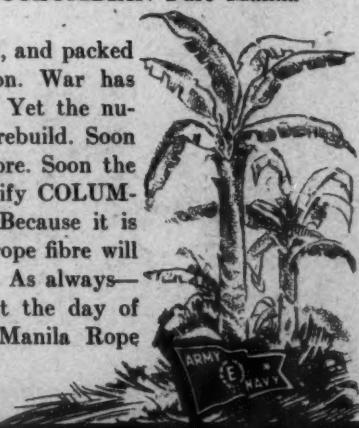
ATLANTIC FISHERMAN

MARCH, 1946

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The choicest fibres were selected, bought, graded, and packed—in the Philippines—by our own organization. War has ravaged our facilities—dispersed our personnel. Yet the nucleus of our organization has set to work to rebuild. Soon now, our facilities will be better than ever before. Soon the men who know Rope will again be able to specify COLUMBIAN Tape-marked Pure Manila and get it! Because it is vital to our industrial structure here at home, rope fibre will be one of the first cargoes to leave the Islands. As always—the best is worth waiting for. We believe that the day of production is at hand. COLUMBIAN Pure Manila Rope will serve you again—and very soon!



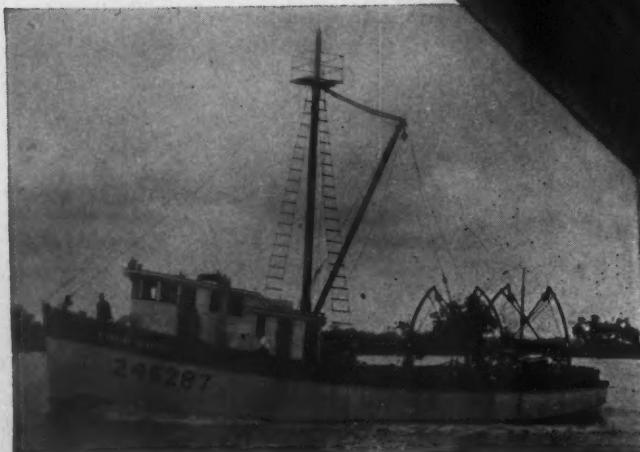
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1210-12 Commerce Street, "The Golden City"

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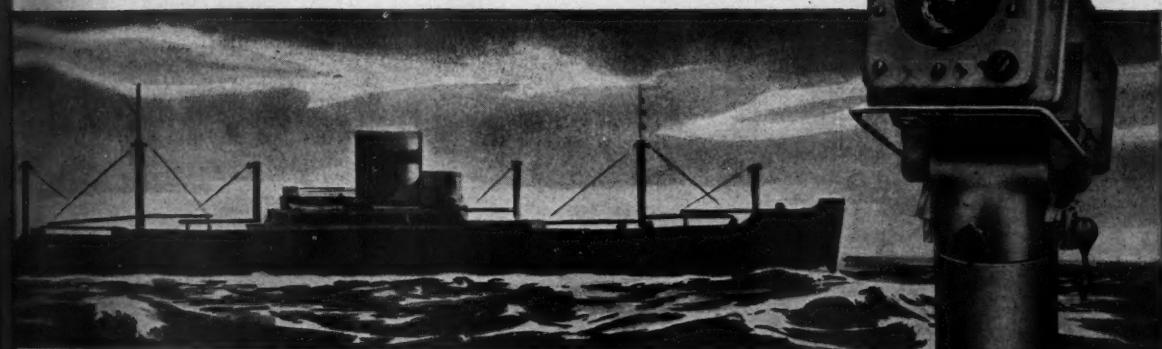
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on America's Fighting Ships



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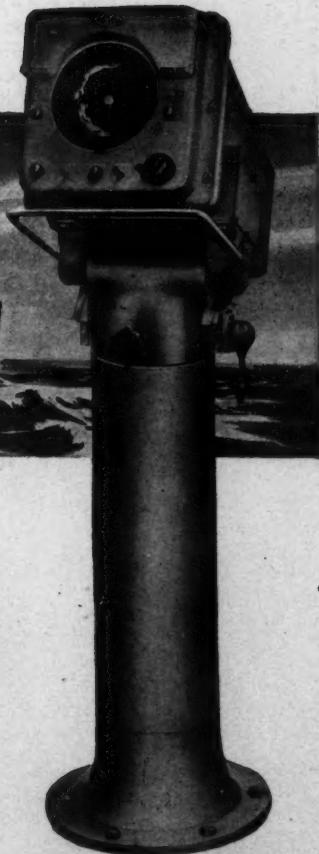
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RAYTHEON RADAR . . . *The "Mariners Pathfinder"* . . . is ready for action! The design is frozen. Production is getting under way. Raytheon will soon begin equipping America's merchant fleet.

The same basic gear that served the Navy as the SG or SO radar has been re-designed in commercial form for the maritime industry. The same proved performance can be counted on! The same skill and experience in manufacturing Navy equipment will go into every set.

Here are some of the highlights of the new gear: range, 50 miles, or down to 100 yards . . . true or relative bearings . . . easy, convenient controls, *all* on the bridge indicator . . . quick access to all components for maintenance and inspection.

This is the radar you will want—the radar that you *know* is "right" from the start. Remember—Raytheon is *the name that means most* in surface-search radar. Write or wire to Marine Department, 112 Foundry Avenue, Waltham 54, Mass.



The INDICATOR can be mounted on the bridge—on deck, bulkhead, or overhead. Note that the head is rotatable vertically and horizontally through 45° . . . adjustable for greatest comfort and convenience!

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"ENTERPRISE DIESEL makes the Sea Scout Fast... and easy to handle!"

—CHIEF ENGINEER JERRY ANDRIES

Put 400 horsepower to work at 400 RPM below-decks, and handling the 62½' helm of a trim purse-seiner like Dragich Bros.' *Sea Scout* is a mighty satisfying job. You're sure your ENTERPRISE Diesel will *keep on* delivering power. And you're sure of maneuverability when you need it! Below, the modern design of your DMG-6 ENTERPRISE Diesel makes it possible to stow bigger catches for bigger profits. Depend on ENTERPRISE for the same power for your ship.

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Skipper Matt Dragich and (left)
the engine room of the SEA SCOUT





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Gentlemen:

We have just placed three orders with your Mr. Larrabee to cover our spring requirements of marine paints.

Our own shipyard services not only our boats but also most of the large fleet of fishing vessels which operate in this area. For many years your products have provided excellent service and we are happy, indeed, to have such a dependable source and we are happy, indeed, to have such a dependable source of supply of a material so important as marine paint.

Very truly yours,

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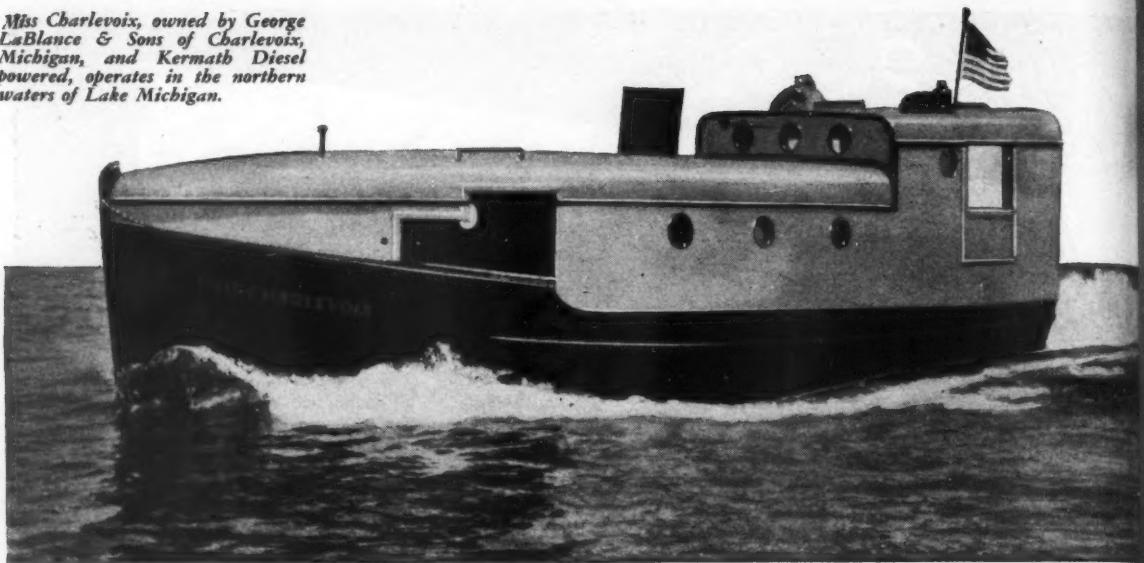
P. J. Bowman
By: General Manager

Since 1861, Pettit has specialized in tough, long-lasting marine finishes that stand the gaff. Pettit also takes pride in its reputation as a dependable source of supply — an important factor to shipyards getting ready to take care of the many overhauls neglected during the critical war years.

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Miss Charlevoix, owned by George LaBlance & Sons of Charlevoix, Michigan, and Kermath Diesel powered, operates in the northern waters of Lake Michigan.



One of a Fleet of Modern Great Lakes Fish Tugs—**KERMATH-DIESEL POWERED**

● Kermath presents this commercial fish tug as an interesting example of the modern trend in design to serve the ends of extreme seaworthiness and extra dryness in the nasty chop of the Great Lakes waters.

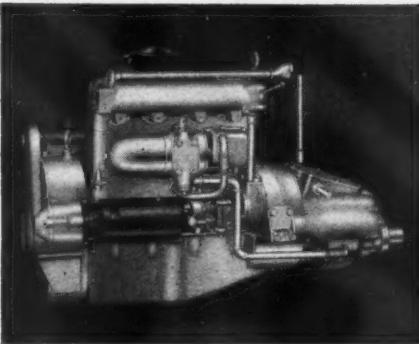
It is powered with a Kermath 4 cylinder, four cycle 65 H. P. Marine Diesel for added economy of operation plus real reliability.

Besides offering this popular Diesel size, Kermath now has three other Diesel engines—a small compact 2 cylinder, four cycle 27 H. P. design and two distinct six cylinder models at 84 H. P. and 113 H. P.

Kermath gasoline marine engines are also available for hundreds of varying commercial applications from the Sea-Cub 4 cylinder 25 H. P. engine to the giant V-12 Sea-Raider "Special" delivering 550 H. P.

We invite consideration of the many engineering improvements now included in Kermath's full-range of time-tested marine power plants that are a genuine promise of added service and satisfaction to those who are compelled to carefully scrutinize operating and upkeep costs.

You may obtain a descriptive booklet with installation diagrams, specifications and ratings on the world's largest selection of marine engines—gasoline and Diesel. If we can be of any help in planning installations our Sales Engineering Department is at your service. Don't hesitate to write us.



The Kermath 4 cylinder 4 cycle medium duty 55-65 H.P. marine Diesel equipped with 2 to 1 reduction and reverse gear—recommended for its reliability and time-proved economy.



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ATLANTIC FISHERMAN, INC.

Goffstown, New Hampshire

P. G. LAMSON, Publisher

GARDNER LAMSON, Editor

L. E. HALL, Managing Editor

20 cents a copy \$2.00 a year

Covering the Production of Fish and Shellfish on the
Atlantic Coast, Gulf of Mexico and Great Lakes

VOL. XXVII

MARCH 1946

NO. 2

Cooperation Between Sport and Commercial Fishermen

At the 11th North American Wildlife Conference, held in New York March 11-13, J. Lawrence Alphen, President of General Seafoods Corp., called for a greater and stronger spirit of cooperation between sportsmen and commercial fishermen as the only logical means of solving their mutual problems.

Mr. Alphen, who also is President of the National Fisheries Institute, was the sole representative of the commercial fishing industry at the conference.

Mr. Alphen pointed out the similarity in the important roles which sport and commercial fishing have in our society. "Since they have so many interests in common," he said, "and since their needs, particularly those dealing with conservation, are mutually felt, cooperation between the two is inevitable."

Defining conservation as the greatest possible use of our fish resources without impairment to their future productivity, he went on to list the things that industry was doing to achieve that perfect balance. He said that industry was working to reduce losses by developing a greater utilization of fish and by introducing new commercial species.

In calling for a program of three points to be undertaken jointly by sportsmen and commercial fishermen, Mr. Alphen said:

"One. Support adequate Congressional appropriations for the Federal agencies charged by law to carry out beneficial fish and shellfish functions. President Truman's recommendation for appropriation to the Fish and Wildlife Service for fisheries work is the very minimum necessary to carry on the work; as a matter of fact, the estimates for commercial fisheries work are the lowest in several years. There is an urgent need for additional funds for sanitation work at fish plants, for development of our water resources, for River Basin studies, for propagation of food fishes. Here is a splendid opportunity for sportsmen and commercial fishermen to combine their energies and influences and work towards a common goal.

"Two. Draw up a comprehensive national program in which the efforts of all fishermen will be properly coordinated to bring about a fuller use of the resources of our oceans and rivers. We suffer now because of pollution, because of obstacles and barriers to our rivers, because of lack of information on the meteorological and oceanic effects upon breeding.

"Three. Sponsor a thorough program of public education to inform people of the available supplies of fish, their high food value, and methods of preparation. We ought to work together to promote the consumption of new species of fish, as a source of good food, and as a means of alleviating the pressure upon the better known varieties."

Mr. Alphen concluded his address by saying: "Intelligently planned programs can provide enough fish for both of us. But without such plans, neither of us can be assured of everlasting use of the country's great fish resources."



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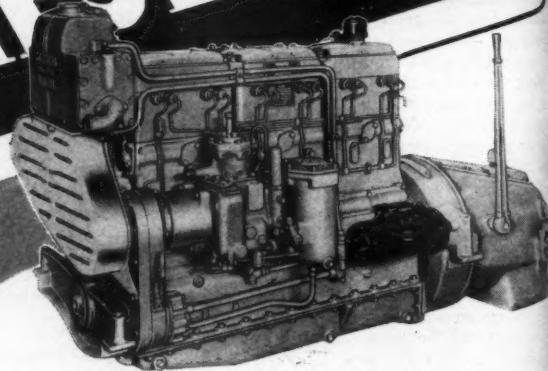
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***The Facts:** The record of Cummins Marine Diesels in fishing boats, work boats and pleasure craft is a 13-year record of unfailing reliability, economy and safety. You will find Cummins

Diesel-powered boats on every coast and every major inland waterway. For your boat, there is a compact, light weight Cummins Dependable Diesel—rated 100-150-200-275 hp (maximum).

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Instant-heating marine transmitters, pioneered by KAAR seven years ago, are famed for their low battery drain. Standby current is zero... yet the moment you press the switch on the microphone, you're on the air! There is no waiting, no delay!

The postwar Series 19 (20 watt), Series 46 (50 watt), and Series 6 (100 watt) KAAR transmitters may be operated on any approved marine frequency from 1600 Kc to 6000 Kc. Models are available for transmission on one to five channels.

The new Series 25 companion marine receivers can be readily mounted above, below or on either side of these KAAR transmitters. The standard KAAR Series 25E has two tunable ranges covering the broadcast and marine bands from 500 to 5500 Kc, and five crystal-controlled channels for improved ship-to-ship, shore-to-ship, land-telephone-to-ship, or Coast Guard reception.

SEND FOR KAAR CATALOG AND NAME OF NEAREST DEALER



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SELECT A MEDIUM OR LONG
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Six 20 watt models . . .

Complete \$280 to \$445*

The most popular 20 watt KAAR radiotelephone is priced at \$355

Seven 50 watt models . . .

Complete \$410 to \$575*

Most popular 50 watt KAAR radiotelephone, illustrated above, is priced at \$485

Nine 100 watt models . . .

Complete \$850 to \$1,085*

The most popular 100 watt KAAR radiotelephone is priced at \$925

* Above prices include KAAR Type 4C microphone, tubes, speaker, power supplies and control cable. Crystals are priced separately.

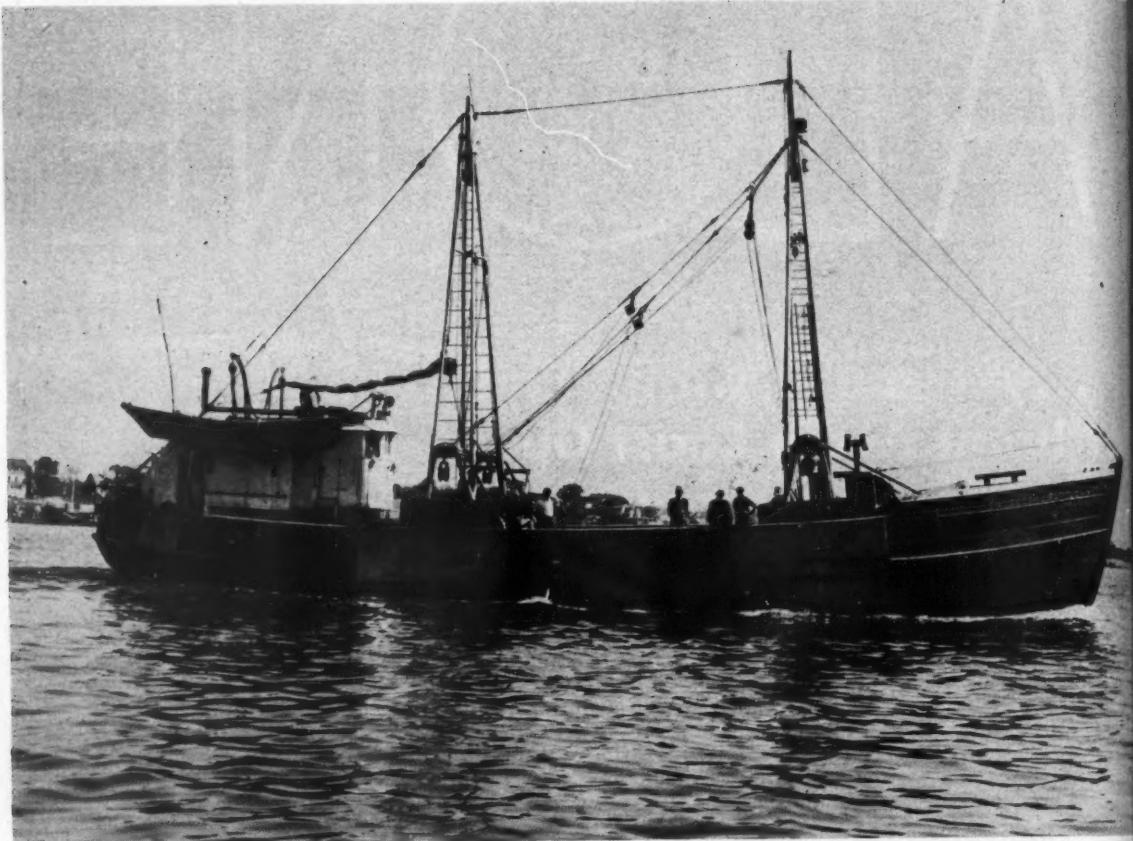
Transmitting Crystals (Type ET) . . . \$8 per channel
Receiving Crystals (Type ER) . . . \$5 per channel

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GLoucester High-Liner



Has a Fairbanks-Morse Diesel

Since she was launched a year ago, the "Joseph S. Mattos", radically designed 83 foot wooden dragger, has been regularly bringing in High Line catches for owner Albino M. Pereira and his son, Captain Anthony Pereira.

Built by the William A. Robinson Shipyards at Ipswich, Massachusetts, the "Joseph S. Mattos" is powered by a 240

Horsepower, Fairbanks - Morse Model 35 F 10 Marine Diesel.

Owner Pereira has captained many Fairbanks-Morse powered vessels in his career and has learned to rely on the Fairbanks-Morse reputation for dependable power delivery under all conditions. That is why he insisted on a Fairbanks-Morse Diesel for the "Joseph S. Mattos".

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The Sounding-Lead

By Fred Lardner
Washington Correspondent

U. S. PRODUCTION—United States production of fish and shellfish during 1945 amounted to approximately 4.4 billion lbs., a decline of less than one per cent from the 4.5 billion lbs. caught the previous year, according to a preliminary estimate by the Fish and Wildlife Service. The total 1945 catch brought fishermen an estimated \$230,000,000, which exceeded the value of the 1944 catch, a previous record, by \$23,000,000.

The sharpest decline occurred in the nation's largest fishery, the Pacific coast sardine industry. The catch of sardines was 1,136,000,000 lbs. in 1944, but dropped to 832,000,000 lbs. in 1945. Largely due to the smaller sardine catch, production, in the Pacific coast states and Alaska fell from 2,171,000,000 lbs. in 1944 to 1,829,000,000 lbs. last year. Among other major fisheries of the area, mackerel and salmon showed declines which, however, were largely offset by gains in tuna and Alaska herring.

The catch of tuna rose to 183 million lbs. from 170 million in 1944. The catch of Alaska herring jumped from 113 million lbs. in 1944 to over 120 million lbs. in 1945. Production of salmon declined from 431 million lbs. to 420 million lbs., while Pacific mackerel fell from 93 million lbs. to 60 million lbs. Production on the Atlantic and Gulf coasts and on the Great Lakes and Mississippi River increased slightly from the 1944 level, totalling 2,546,000,000 lbs. in 1945 compared with 2,333,000,000 lbs. the previous year.

The major ports in the New England area had the busiest year in their history, handling approximately 568 million lbs., a gain of more than 100 million lbs. over 1944. The menhaden fishery, heaviest producer on the Atlantic coast, showed some gain compared to 1944. The 1945 production was 740 million lbs., while in 1944, 685 million lbs. were caught.

Compared with the average of the past four years, more of the 1945 fish catch was utilized in the fresh or frozen state, while somewhat less went into production of canned fish and by-products. About the same quantity was cured. The catch was utilized as follows: 1.7 billion lbs. were marketed as fresh and frozen fish, 1.2 billion lbs. were canned, 1.4 billion lbs. were utilized as by-products, and 0.1 billion lbs. were cured.

PRICE CONTROL—Long delays in dropping price controls were forecast by Chester Bowles in recent House hearings on a deficiency appropriation bill. The original schedule called for ending price ceilings on fresh fish by April 1, 1946, and the termination of control on almost all food commodities by June 30. OPA's judgment now is that some varieties of fresh fish may be removed from price control by May of this year.

PHILIPPINE SURVEY—A four-month field survey of the commercial fishing industry of the Philippine Islands has been undertaken by the Fish and Wildlife Service to determine what equipment, materials, and funds will be needed to restore the fisheries to early production. The study will be directed by John R. Webster, fishery engineer for the Service.

WORLD SUPPLY—World supplies of fresh fish will be considerably higher in 1946, according to the Office of Foreign Agricultural Relations. Supplies of salt fish will be increased rapidly as Norway and Iceland resume production. A moderate increase is expected in the supply of canned fish. The absence of fishing activities for several years in the grounds off the European coasts has resulted in a large increase in the fish population, which means that although there is less equipment, more fish will be caught.

Latest estimate of the world's exportable surplus of salt fish for 1946 is 275 million lbs., or 74 per cent more than for 1945. Estimated requirements total 375 million lbs., or 36 percent more than supplies. Trawlers from Spain, Portugal and France will operate extensively this year, but their catches will probably be consumed in those countries.

It is expected that total world production will be 63 percent



a Clean Bottom ... more fish!



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G. M. TROPICAL COPPER PAINT and G. M. FISHING COPPER BOTTOM PAINT are made especially for the work boat and fisherman.

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The right tool helps ... APLENTY!

Seafood folks, like carpenters, are fussy about their tools; the better their tools, the easier they make their living. We guess that's why more Briddell rakes, tongs and knives are on the job than any other make.

Take that Jersey pattern rake up there (Virginia pattern not shown, but we have it): Those 4½" knife-blade teeth are oil-tempered and hand-welded; the handle is on to stay. Like all Briddell seafood tools, the rake is made by Eastern Shore folks who know what their neighbors need—and see that they get it. At better dealers.

Briddell products are advertised to 15,000,000 readers, every other week, in the Saturday Evening

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OYSTER TONGS AND KNIVES • GRAPNELS
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of prewar supplies. Anticipated supplies of canned fish are expected to be seven percent larger than in 1945.

SANITATION PLAN—Washington authorities generally agree that the fishing industry would benefit greatly from a Federally-sponsored sanitation plan. At present the Food and Drug Administration is the only Government agency concerned with seafood sanitation.

A program similar to that prevailing in the meat-packing industry would require a sizable number of inspectors, as much emphasis is now placed on Section 402 (a) (4) of the Food and Drug Act, which states that a food shall be deemed to be adulterated if it has been prepared, packed, or held under unsanitary conditions whereby it may have become contaminated with filth, or rendered injurious to the health.

SCHOOL LUNCH PROGRAM—Under provisions of bills recently passed by the House and Senate, seafoods will be included in the National School Lunch Program for the first time, beginning July 1. The House bill provides for an expenditure of \$50,000,000 annually, while the Senate bill provides for an annual expenditure of \$100,000,000. Contributions of State and local Governments to the program are expected to be double or more the Federal contribution. Therefore, if Congress decides on an annual appropriation of \$75,000,000, the total expenditure for the program may be \$225,000,000.

PRODUCTION GOALS—Production goals for 1946 have not been fixed. Goals are as follows: canned fish and shellfish, 811,000,000 lbs.; cured fish, 100,000,000 lbs.; fresh and frozen fish and shellfish, 1,701,000,000 lbs.; fish meal, 530,000,000 lbs.; fish liver oil, not including imported oils or vitamin A made therefrom, 70 trillion units of vitamin A. Goals are about the same as last year with the exception of cured fish. Removal of war-time restrictions has enabled the Government to establish a cured fish goal more nearly equal to demand.

It is expected that 1946 production will exceed that of 1945. Production of salmon for 1946 is estimated at 5,500,000 cases as compared with 4,832,895 cases in 1945; pilchard production 3,800,000 cases as compared with 3,786,752 cases in 1945; canned tuna, 4,500,000 cases, and Maine sardines, 2,500,000 cases.

UNRRA has requested 750,000 to 1,000,000 cases of United States supply, the exact amount depending on availability, and the British want 1,250,000 cases of salmon and 1,000,000 cases of pilchards.

HOME DELIVERY—For many years home delivery of fresh dairy and bakery products has been an integral phase of the marketing of these foods. Now with the imminent large scale advent of the home frozen regular home delivery of all types of frozen foods, including dairy products, can be expected.

Delivery companies eventually should be able to deliver frozen foods at comparatively economical costs because of two factors: negligible spoilage or waste loss due to perishability, and low delivery cost because of infrequent, large volume deliveries.

Several companies are presently engaged in home delivery of frozen foods, and many more are expected to enter the field of activity. Seafood, because of economy, variety, ease of handling and preparation, should prove to be one of the most profitable commodities available to home delivery companies for distribution.

LEADING PORTS—The leading United States fishing ports in 1945, in weight of fish landed, were San Pedro, Monterey, Gloucester, San Francisco and Boston, in the order named; but in terms of value of landings, Boston held first place. Following these ports were two on the east coast and one on the Pacific coast: Lewes, Del.; Beaufort-Morehead City, N. C.; New Bedford, Mass.; San Diego, Calif.; and Reedville, Va. These ten ports received approximately half of the nation's total production of fish and other aquatic products.

San Pedro, which has held first place for two years in succession, handled approximately 480,000,000 lbs. in 1945. The bulk of the landings were pilchards or sardines, although mackerel also were landed in considerable quantity.

Landings of pilchards are responsible for the high rank of Monterey and San Francisco, for at both ports this single species

La. is one of the

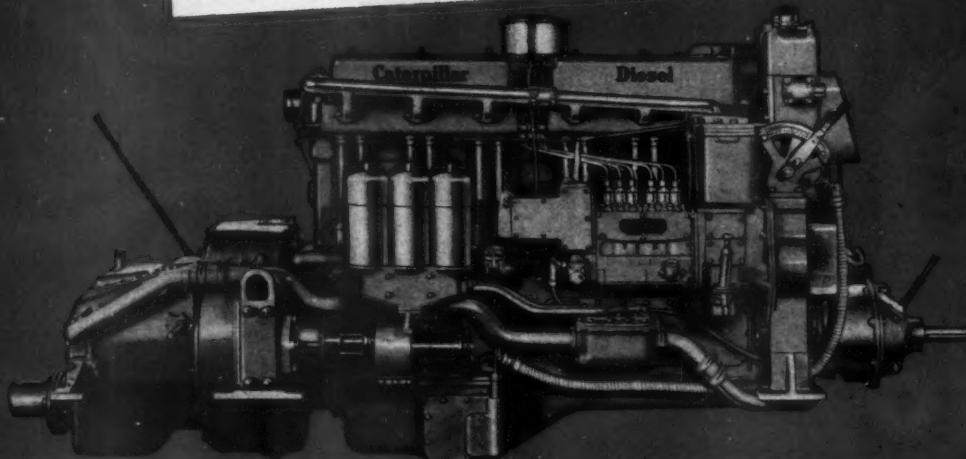
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"Up to twenty

“Finest kind of performance under difficult operating conditions”

JOHN VERSAGGI,
Versaggi Shrimp Co.

CATERPILLAR DIESEL
REG. U.S. PAT. OFF
Marine Engines



The horsepower of "Caterpillar" Diesel Engines is ALL WORKPOWER. Ratings show true output of a fully equipped engine — not the momentary peak performance of a power-plant stripped of pumps or other necessary accessories.

Versaggi Shrimp Company, Patterson, La., is known along the Atlantic and Gulf coasts as one of the largest producers of fresh and frozen jumbo shrimp. A recent letter from John Versaggi says:

"The success of our business in recent years has been due largely to the wonderful performance of the 'Caterpillar' Diesels that now power our fleet of seventeen modern trawlers. Your repair service and parts have been an important factor, too. During these critical times we experienced very little inconvenience in the maintenance and upkeep of our 'Caterpillar' Diesels. We shall never overlook nor forget this excellent service which paid us handsome dividends in time and money."

"Up to this date we have purchased more than twenty 'Caterpillar' Diesel Marine Engines. We

were the first to use a D13000 with 2 to 1 reduction gear in the production of shrimp on the Atlantic coast. We also pioneered the first D17000, all of which have given us the finest kind of performance under some of the most difficult operating conditions."

"Caterpillar" Diesel Marine Engines are simple, sturdy, dependable. They're built to give you a long life of honest work. In hundreds of fishing and work boats their economical performance and freedom from repairs have repaid owners many times over.

You can buy a "Caterpillar" Diesel now. Before you order a new boat or replace your present engine, see your nearby "Caterpillar" dealer. He knows the needs of the fishing industry and he has the best parts and service facilities in the business.

CATERPILLAR TRACTOR CO., PEORIA, ILLINOIS

Insist on

MICHIGAN MACHINED-PITCH PROPELLERS

for
**Smoother GOING
MORE SPEED
and
Greater RESISTANCE
to CORROSION**

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No. 145**

It describes how these qualities are unerringly built into every MICHIGAN wheel.

**AVAILABLE IN DIAMETERS
UP TO 44 INCHES**

Outboard line is the most complete in existence.
Write for New Catalog.



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of propellers of all makes and types is guaranteed by our nationwide service stations. Write for address of nearest one.

MICHIGAN WHEEL COMPANY · Grand Rapids 3, Michigan

comprises more than 90 per cent of the landings. Last year Monterey received a total of 330,000,000 lbs. of all species while San Francisco's landings were 200,000,000 lbs.

Three Atlantic Coast ports—Lewes, Del.; the Beaufort-Morehead City area of North Carolina; and Reedville, Va.—among the ten principal fishing ports because of their landings of menhaden. Landings of this fish, together with minor quantities of other species, totalled approximately 175,000,000 lbs. at Lewes last year. Beaufort-Morehead City received about 143,000,000 lbs., of which probably 90 percent was menhaden while Reedville, ranking tenth on the list, received about 100,000,000 lbs., almost entirely menhaden.

Among other ports with landings ranging between 40,000 and 80,000,000 lbs. were Fernandina, Fla., which received about 74,000,000 lbs., chiefly menhaden; Astoria, Ore., with about 48,000,000 lbs.; and Seattle, Wash., and Provincetown, Mass., with about 42,000,000 lbs. each.

FROZEN HOLDINGS—Inventories of frozen fish in freezers and cold storage establishments throughout the country are still abnormally high, totalling approximately 115 million lbs. on February 1, or 10 per cent above the average holdings for this season, according to the Fish and Wildlife Service. During January 6,600,000 lbs. of fish and shellfish were frozen. Although stocks of frozen fish are less than they were a month earlier, they are 36 million lbs. larger than on February 1, 1945.

Fishery products now in freezers and cold storage establishments include 86 million lbs. of salt water fish, 11 million lbs. of lake and river fish, and 18 million lbs. of shellfish. Frozen fillets of cod, haddock, rosefish, flounders, mackerel, and a few other species account for about 22 per cent of the total holdings.

GABRIELSON RETIRES—Acting Secretary of the Interior Oscar L. Chapman announced that Dr. Ira N. Gabrielson, director of the Fish and Wildlife Service, will retire on April 1. Dr. Gabrielson has been director of the Service since it was formed in 1940 through consolidation of the United States Biological Survey, of which he had been the chief since 1935, and the Bureau of Fisheries. He has had continuous employment with the Service and its predecessor agencies for more than 30 years.

Dr. Gabrielson will be succeeded by Albert M. Day, now assistant director of the Service. Mr. Day has been associated with the Service or the Biological Survey since 1919, when he was appointed a field assistant. He became asst. director in 1935.



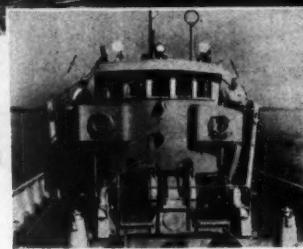
Get that carpenter down here—we've got to widen this door for Blodgett.

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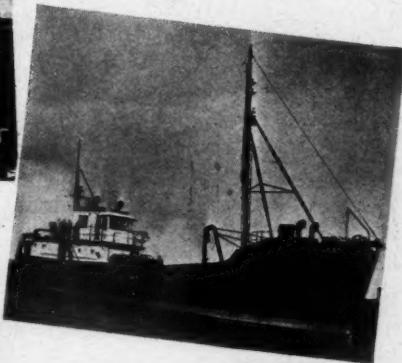
12 More New Beam Trawlers Select "New England" Equipment

ROSEMARIE M. owned by Suffolk Fish Co. of Boston. Designed by John Alden and Eldredge-McInnis, and built by Wheeler Shipbuilding Corporation. 400 H.P. Atlas Diesel Engine. Length 100'; beam 22'6"; draft 12'. Model W. F. 70 mechanical drive winch and deck equipment supplied by New England Trawler Equipment Co. The sister ship is the **NINA B.**



Forward deck of 100 ft. steel beam Diesel trawler.

LUCKY STAR owned by Vickers & Nakash of Boston. Designed and built by Sturgeon Bay Shipbuilding Co. Length 82' 8 1/2"; beam 21' 9"; draft 9' 3"; 400 H.P. Enterprise Diesel Engine. Model W. F. 70 mechanical drive winch and deck equipment by New England Trawler Equipment Co. Her sister ship is now under construction.



THE BAY owned by O'Hara Bros. Co. of Boston. Designed by John Alden, and built by John H. Mathis Co., Camden, N. J. Length 106' 6"; beam 23'; draft 12'. 550 H.P. Atlas Diesel Engine. Model W. F. 80 fluid drive winch and deck equipment by New England Trawler Equipment Co. The sister ship is the **RUSH**.

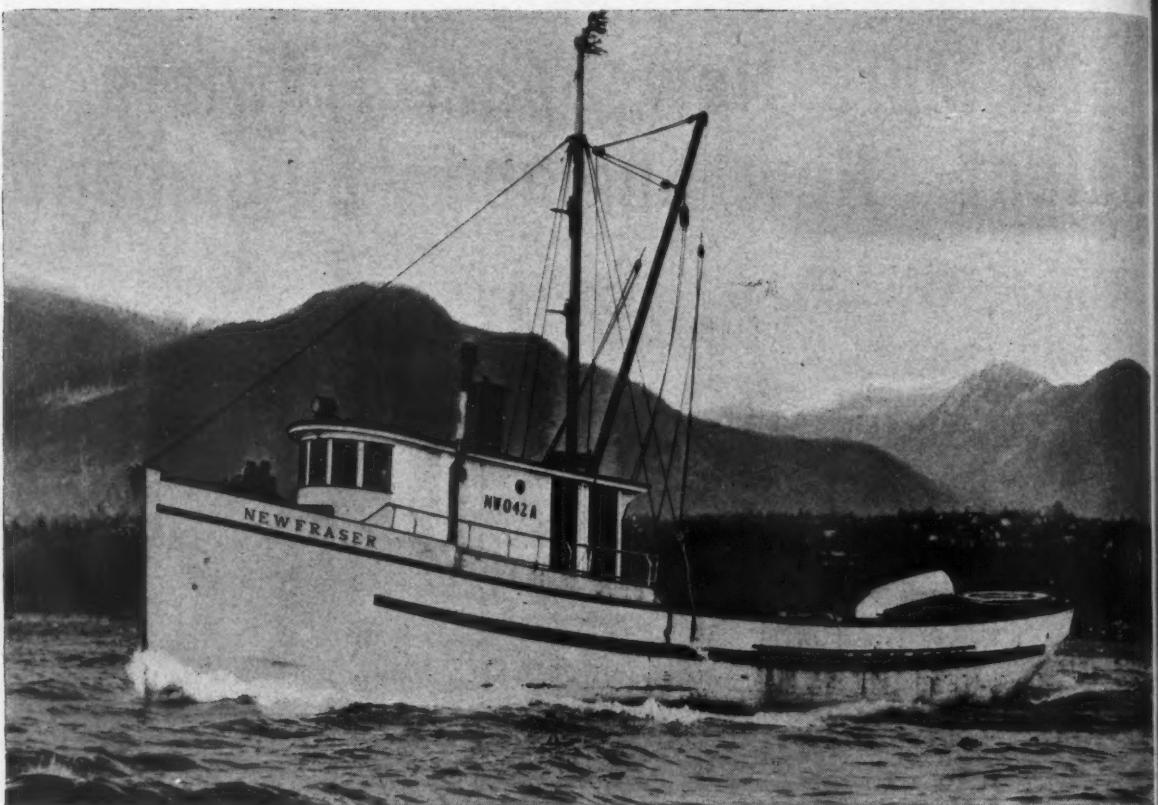
For more than 20 years the New England Trawler Equipment Co. has been the outstanding supplier of deck equipment for fishermen in the North Atlantic. In addition to the installations shown above, new installations of WF-70 "Highliner" winches will soon be made on four new trawlers now being built for Gorton Pew Fisheries, Producers Fish Company, and Mr. Lawrence McEwen. New England WJ-80 Electric Winches have been specified by Capt. Russell Grinnell Jr. for his new trawler being built at Fairhaven, and by Halifax Fisheries Ltd. of Nova Scotia for their new trawler building at Mahone Bay. Whether your fishing boat be 60 ft. or 225 ft. it will pay you to talk your problem over with us when you are considering the purchase of

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Her 150 HP MURPHY DIESEL is compact, saves space and weight, provides more cargo space for bigger payloads. This husky, heavy-duty engine has plenty of power and ruggedness for its work in any

sea . . . and like all MURPHY DIESELS, it is economical in operation and maintenance.

These are engine qualities that help MURPHY DIESEL powered fishing vessels and other work boats pay off better, with bigger shares for ship owner, captain and crew.

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Suggestions for Improving Quality

By Dr. Leslie A. Sandholzer

RECENT conversations and a review of literature reveal an intense need for a program to improve quality in all phases of the fishery industry. Although much can be done on the basis of what is already known, this information must be made available in a form which the industry can use. At the present time only a fraction of our current knowledge is intelligible to the industry because of its technical language. It is important that this situation be remedied by translating the words into everyday language.

In addition to translating already known facts for industrial use, new work must be started if the American fisheries are to produce top quality products efficiently. For example, it is customary to be concerned about the sanitary quality of water only when shellfish production is involved. However, it has been shown that the keeping quality of fresh sardines is directly correlated with the degree of pollution of the waters from which they were taken. The rapid spoilage of crabmeat and other fishery products may be correlated with the same or similar factors. Therefore it may well be that one of the primary considerations in the production of good quality fish should be the sanitation of the water in which the catch is made.

Although we vaguely appreciate what is meant by the term "poor handling" there is insufficient detailed knowledge available from which recommendations can be made. Each of the fisheries has its peculiar problems in this regard and much more study is required before specifications for fish-handling can be recommended.

Plant construction and management have not received the attention necessary for efficient operation and quality production. More information is required concerning the procurement of cheap, adequate and safe water supplies for fishplant operations. Aside from chlorine and its compounds, little is known about other methods of sterilization even though other food industries have already put to use many other compounds. Of the efficacy of new detergents and cleaning agents in fish plant cleanliness, almost nothing is known even though the need for this type of knowledge has been obvious for some time.

Quality production also depends upon a number of other factors and the development of new, improved methods of processing and distribution. Among the possibilities which could be looked into are the following: The use of glycols for maintaining "freshness" of fish. The development of better methods for handling fish from the time of catching to the time of consumption. Methods for purifying shellfish could be investigated from an engineering viewpoint.

The success of a quality program is dependent upon two things, a desire on the part of the industry to produce a wholesome product and the availability of technically trained personnel to make essential information available to industry. Quality production based on coercion can never succeed. It must originate with the producer and become a part of the spirit of the entire industry.

Regulation of the industry by Federal and State regulatory agencies has not resulted in the production of quality fish. There are a number of reasons for this. The agencies concerned have not had the interests of the fisheries in mind when they have imposed regulations. They are not in a position to do research for the industry which will aid it in meeting the sanitation and

wholesomeness requirements. Those shortcomings have goaded the fishery industry to an attitude of resentment and non-compliance in many cases and quality has suffered as a consequence.

In the best interests of quality production it would seem reasonable to compose a list of recommended practices which can be used as a working guide by the industry. These should be drawn up by a group of technically trained individuals in cooperation with the fishing interests. This group should not be a regulatory agency but it should be endowed with the privilege of conferring with the Federal and State regulatory agencies with the aim of procuring more reasonable standards and requirements. The group should also encourage industrial interest in the policing of its own activities. This could be accomplished by using a system of certification similar to that now employed by the U. S. Public Health Service for shellfish. In fact, it would be highly desirable to transfer that particular certification to this group as soon as practicable.

The scope of such a program for the improvement of quality appears to be overwhelming at first glance but a definite start could be made almost immediately without too much difficulty. By surveying the situation in each state, a specific idea of the most urgent problems could be obtained. By bringing all of the survey data together, a program could be planned which would permit work to be started on the broadest possible basis.

The program could be divided into five categories, administration, engineering, bacteriology, parasitology, and chemistry. Under these designations can be grouped most of the problems of quality production. The problems may be listed as follows:

Sanitary Engineering: To make sanitary surveys of polluted areas; protection of clean waters; design and construction of equipment; investigation of sanitation problems of fishery operations.

Bacteriology: In close cooperation with the engineering section, to investigate pollution, to devise methods for sanitation control, to test fishery products for bacterial spoilage and food-poisoning potentialities of bacterial origin, and to develop tests for the efficacy of antiseptics and detergents as used in the fisheries.

Parasitology: To investigate the incidence of parasitic infestations in commercially important fish; to test the significance of such parasites in human disease and to devise methods of control, either in natural populations or by control measures in commercial practice; to investigate the role of protozoa and other forms in relation to fish and shellfish poisoning.

Chemistry: To investigate problems of chemical pollution and toxicity; to collaborate with other groups whenever chemical assistance is required; to develop and recommend to industry safe and efficient soaps, detergents and antiseptics.

It should be made clear that such a program be integrated with the work now being done by the technologists and biologists but its emphasis should be entirely on the production of high-grade wholesome food. It must be developed in cooperation with the fishery industry and the various State agencies concerned with fish production. Under no circumstances must it be set up as an independent bureaucracy. The organization responsible for doing the job must have a degree of independence in determining policy and freedom of operation and not be merely a secondary part of already existing units.



British scientists "farming the sea". In Lochs Craigin and Sween on the west coast of Scotland scientists have found that by adding sodium nitrate and superphosphate to the water fish have grown twice as fast as normally. These experiments may lead to deliberate culture and control of fishery resources.

Diesel Engine Design and Operation

Wm. H. Radcliffe Describes Fuel, Lubrication and Cooling Systems

In a Diesel engine, lubricating oil in the bearings and other moving parts to prevent undue friction and wear is as important as the fuel oil, because the efficiency of the engine and its ability to function properly depend to a considerable extent upon the lubricating system. The lubricating oil must flow freely throughout its circulating circuit even in cold weather.

The Lubricating System

The lubricating system in a modern Diesel engine comprises an oil tank for storage, a pump for circulating the oil, an oil filter to remove any obstruction such as sand, scale, carbon, dirt or other deposits that interfere with the circulation of the oil, an oil-pressure gage and a thermometer for indicating the oil temperature. No hand oiling of any part of the engine is required, but there may be used what is known as the splash system whereby the oil placed in the crank case or sump is

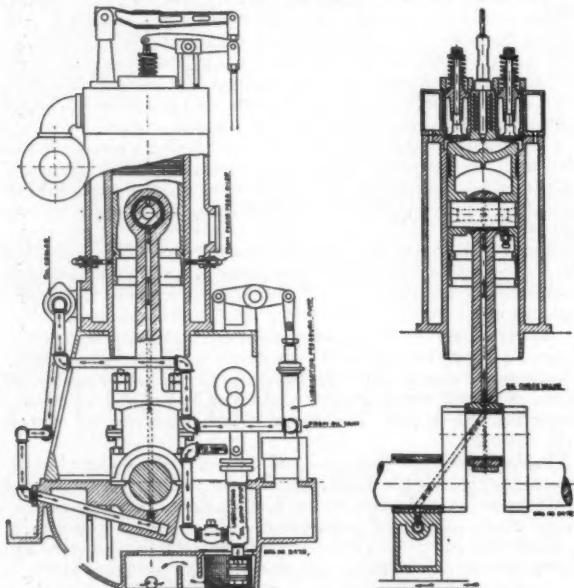


Fig. 9—Diagram showing path (indicated by arrows) of lubricating oil through engine.

splashed over the moving parts by crank operation. Inability to regulate the quantity of oil thus splashed against the cylinder wall, which may flood the packing ring grooves and there carbonize and cause the rings to stick in the grooves, is liable to cause trouble unless watched carefully. The lubricating oil may also get past the piston head and burn with the fuel oil which is of a different consistency, reducing the power of the engine considerably.

In a forced lubricating feed system operated by a pump, the engine housings must be completely closed in so there is no loss of oil, and the oil piping from the oil pump and return through the engine must form a closed circuit.

The lubricating system in a typical Diesel engine is shown in the sectional diagram, Fig. 9. Oil is forced by the pump from the supply tank to the cylinder walls through a small pipe connected to the inlet and exhaust side of the cylinder wall, which allows not more than 13 or 14 drops of oil per minute. The main bearings of the engine are supplied with oil under a pressure of about 10 pounds as indicated on a pressure gage connected in the oil pipe line. All the oil pumped through these bearings is collected in the crank pits, flows to a sump through a strainer, is pumped from the sump through a filtering tank, and then back to the main bearings. The crank shaft

revolving in the main bearing has a hole drilled through the crank pin through which the oil is forced to lubricate the connecting rod bearings or crank pins. In the top half of the crank bearing is a hole for the oil to enter the connecting rod which is drilled hollow and fitted with a check valve at its lower end to prevent the oil returning back into the crank. Thus the oil which is forced through the crankshaft and through the hole in the bearing must pass through the check valve and up through the hollow connecting rod to lubricate the wrist pin in the piston.

Having thus run its course through the engine, partly through the main bearings, partly through the crank bearings and the remainder through the wrist pin bearings, the lubricating oil returns by gravity to the sump in the bottom of the base, again to be recirculated. The whole system is automatic and requires no attention other than an occasional inspection of the oil level in the sump.

To remove obstructions such as sand, scale, carbon dirt or other deposits that interfere with the oil circulating system an oil filter is used. This may consist of a closely woven cloth or a wound-wire screen for straining the oil, though some filters employ both, the wire screen for coarse filtering and a cloth unit for removing very fine particles. In the latter type the two filtering or straining elements can be pulled apart for cleaning and are enclosed within a shell. To clean the filtering units, wash them in gasoline, fuel oil or kerosene, using a clean cloth or soft bristle brush. This should be done twice a week and the plug at the bottom of the filter shell removed to allow the dirt, water and sludge which has accumulated to drain out of the filter.

Lubricating Oil

Lubricating oil obtained from paraffine base oils gives good service though any high-grade oil is satisfactory. It should not be of a higher temperature in service than 100 degrees, Fahrenheit, or it will be too thin and flow too freely. If its temperature becomes higher than this through contact with the heated parts of the engine, it should be run through a cooler. Pump pressures vary from 10 to 60 pounds per square inch, depending upon the size and type of the engine bearing journals. The lubricating quality of the oil is lowered, of course, if there is any water in it, and this can be detected by its milky appearance. Diesel engines require about a gallon of oil for each 600 to 1,000 horse-power-hours of operation, though some exceptionally well designed engines will operate up to 3,000 horse-power-hours on a gallon of the highest grade oil.

Fuel Oil

The fuel oil used in a Diesel engine is of different consistency than the lubricating oil. It is a refined distillate of crude oil or petroleum as it comes from the ground and contains approximately 85 per cent carbon and 15 per cent hydrogen but needs the oxygen in the air to make it burn; also a temperature of 800 to 1,000 degrees, Fahrenheit, which is obtained by compressing the air.

High-speed engines, that is those operating above 1,000 rpm, use a lighter fuel oil than slow-speed engines, but in any case the oil must be free from dirt, water and other foreign substances, and have a flash point of not less than 150 degrees Fahrenheit, with a burning point 50 to 100 degrees above this.

Fuel oil must also flow freely through the pipes, valves and so forth, to function properly in a Diesel engine, and this factor is known as the viscosity or fluidity of the oil. Light oils such as kerosene are not suitable for Diesels as they have little oil lubricating value and are liable to damage the valves and pumps.

The Cooling System

Aboard fishing craft, the engine cooling system in its simplest form is an open system comprising a pump which draws water from the ocean, river or stream, forces it through a strainer or filter and then into a distribution main which has a connection

(Continued on page 40)

Three Vessels in Parker Fleet are Renovated

Repowered and Refitted to Insure Efficient Operation

ONE of the well known fishing vessel fleets in Boston is that of A. L. Parker, which includes the *Gertrude Parker*, *Geraldine* and *Phyllis*, *Venture II*, *Alpar* and the *Mary W.* Parker entered the fish business directly from school 54 years ago, and now at the age of 72 continues to be active in both the production and distributing ends of the industry. In addition to acting as agent for the above vessels, he is associated with the wholesaling firm of Arnold-Winsor Co. During Parker's career, many changes have taken place in vessels, fishing methods and equipment, and he has strived to keep abreast of developments by continually modernizing his fleet.

Shore captain and engineer of the Parker fleet is Lawrence Soule, who went to work for Parker after finishing school in 1922, being promoted to his present position 14 years later. Mr. Soule, who is better known as Larry, has made a thorough investigation of the operation of fishing vessels. He has made several trips to the fishing banks in order to secure first hand information on fishing methods and to gain a better understanding of fishermen's problems.

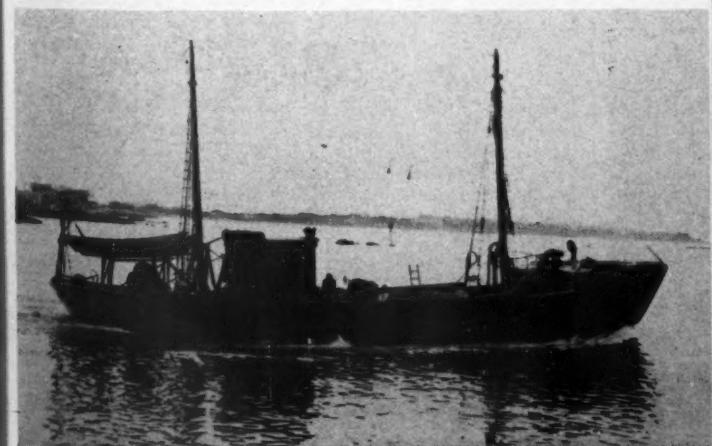
In addition, through constant observation and study, he has acquired a working knowledge of the upkeep and operation of vessels and their equipment. As a result, he has been able to take advantage of the latest ideas in the maintenance of the Parker fleet.

The vessels have their engines inspected after every trip, lubricating oil is examined at regular intervals and a general check-up is made on the engines during the annual hauling out of the vessel.

The progressiveness and foresight of Parker and Soule in keeping their fleet modernized is evidenced in the recent renovation and repowering of three vessels.

The *Gertrude Parker*, a 16 year old dragger of wooden construction skippered by Capt. Nick Sampson is 93' x 21' x 10' with 115 gross tonnage, 78 net tonnage. Her original 230 hp. Cooper-Bessemer Diesel was replaced by a new 260 hp. Cooper-

Below, the "Gertrude Parker" owned by A. L. Parker, Boston, recently refitted and repowered. Right, her new 260 hp. Cooper-Bessemer Diesel engine.



A. L. Parker's 104', 17 year old "Mary W." of Boston, powered by a 180 hp. Cooper-Bessemer Diesel.

Bessemer, 10½ x 13½, Type GS6. This engine has a direct-reversible clutch and swings a 62 x 38 Hyde propeller on a 6" bronze shaft with a babbitt stern bearing at 350 rpm., giving the vessel a speed of 9 knots.

Alterations made on the dragger included the addition of a whaleback, the installation of a new steel trunkhouse and the rebuilding and enlarging of the fish hold with watertight bulkheads to provide a capacity of 140,000 lbs.

A new 75 hp. Electro-Dynamic motor was installed in the top of the engine room for driving the Bromfield winch. The fuel tanks, lighting system and voltage regulators were replaced and new 32 volt 350 amp. hr. Willard batteries installed.

The auxiliary unit is a 16 hp. Lister-Blackstone Diesel engine operating a belt driven 5 kw., 111 amp. Diehl generator. Other auxiliary equipment includes an 80 kw. generator, a Quincy air compressor and Gould electrical centrifugal bilge pumps.

Equipment in the pilot house and captain's stateroom includes a Kelvin-White compass, RCA direction finder, Jefferson-Travis radiotelephone and Submarine Signal Co. Fathometer.

The fo'c'sle has accommodations for 8 men and the galley is equipped with a Shipmate range. The after cabin has quarters for 4 men, and an Arcola boiler supplies the heat for the radiators in the after cabin, engine room and pilot house.

The 92' x 21' x 10' dragger *Geraldine* and *Phyllis*, also 16 years old and skippered by Capt. Mike Druken, underwent the same engine change as the *Gertrude Parker* and similar renovations. Both vessels were built by James Shipyard in Essex, Mass.

The 104', 17 year old seiner *Mary W.* was completely rebuilt from the deck up with a new deck house, rigging and equipment. She was repowered with a new 180 hp. direct-reversing Cooper-Bessemer Diesel engine. All three boats use Shell fuel and lubrication oil.



Eye Troubles Common To Fishermen

**Dr. Waldemar Schweisheimer Discusses
Old Sight, Inflammation and Injuries**

RECENTLY the problem of Presbyopic Workers has been treated in the medical press,—no wonder when we consider that so many more older workers are busy now. Usually between the ages 40 to 50, presbyopia (old sight) begins to be felt. It is actually a normal change due chiefly to loss of elasticity of the lens of the eye. A fisherman of some 43 or 45 years of age who has always had a good eyesight may note that he must push his work (or his head) further and further away for exact vision. Different glasses may be needed for working at close range or reading,—and for seeing in distance. In such cases either two pairs of glasses are used alternately; or the fisherman uses glasses the upper part of which is ground for distance while the lower part is ground for objects at close range.

If conditions are not corrected, the presbyopic may suffer from pain in the eyes, fatigue, lacrimation (shedding tears), dimness of vision, headaches. Many a highly skilled and experienced older fisherman can continue to perform efficiently also with jobs which need working at close range if he has the proper glasses,—or if stronger illumination is provided for the aging eyes.

Conjunctivitis in Fishermen

The term conjunctivitis means inflammation of the conjunctiva, that is, the delicate membrane that lines the eyelids and covers the white of the eye. Let's mention only shortly the common conjunctivitis caused by intense light or glare of the sun or by rough weather conditions or the influence of salt water on the eyes.

But there are other conditions particularly observed in fishermen. Dr. L. Heijermans has described a series of eye troubles that have been observed amongst fishermen or those handling fish. Thus, for example, there may be mentioned the special form of conjunctivitis caused by handling eels and due to the action of their blood, which causes redness of the eyelids, bloodshot eyes and hypermia, watering of the eyes and a burning sensation. Eels, in their blood and also in their bile, have a certain substance which irritates the conjunctiva. It may also irritate the cornea,—which is the transparent part of the eye through which is seen the pupil, the dark hole in the middle of the eye.

If the conjunctivitis goes on, it feels itching and burning, and an unpleasant sensation of grit under the eyelids. A sticky secretion is poured out from the conjunctiva. Frequently the edges of the eyelids and the eye lashes are glued together in the

morning,—one of the most striking signs of a conjunctivitis. The eye may become very painful and exposure to the bright light of the open air causes acute discomfort. The first step of any treatment is to remove the irritating cause,—for example, removing the foreign body which has settled on the surface of the eye. Cold compresses may relieve the painful sensations until the doctor starts his local treatment. If light is hurtful, the eye may be protected by a shade and by dark glasses. As a rule, the eyes should not be bandaged, because this promotes the formation of pus under the eyelids.

Other Eye Injuries

Dr. Heijermans has described the inflammation of the cornea (which is known as keratitis) in oyster sellers and other people who have to work with clams. The condition in question is a lesion of the cornea due to small particles of the oyster shell which may be projected into the eye during opening of the oysters. These fragments of the shell are quickly eliminated by the movements of the eyelids as well as the production of tears. Still they had time to produce a circumscribed and not very deep lesion on the cornea. When the little wound produced by the clam particles goes deeper, conditions may be more serious. In most cases, however, the lesion heals up quickly and without lasting damage to the eye. The relative violence of the lesion of the cornea has been attributed to chemical substances which are contained in the shell. One ingredient of the shell which is probably particularly irritating, is calcium carbonate.

There has been observed amongst fishermen a form of cataract due to certain larvae of ringworms which are connected with the excrement of seagulls found on the skin of fish. A cataract is a disease of the eye which consists in the loss of transparency of its lens. All light has to pass through the lens, and if this is not transparent any more but opaque, blindness is the result. The loss of the transparency is usually a gradual one, and not until the entire lens is opaque is the cataract said to be "ripe". The first sign of the presence of a cataract may consist in persistent tiny specks before the eye. Vision is then noticed to become progressively worse; strangely, the man usually sees better in a dim light.

The infection with the larvae takes place by ingestion of infected water, or by direct contact of the eye with the unclean skin of fish. Small white corpuscles are found under the capsule of the lens of the eye; they are due to the presence of the larvae of the parasite. Occasionally there has been described an epidemic of cases of cataract as occurring among fishermen, and it was caught in their contact with fish. When the lens of the eye has been changed in the way described and has lost its transparency, there is no other method of treatment but an operation which removes the lens,—but this method is very satisfactory and restores bright vision to a blind man.

Proper Lighting

Proper lighting and strong illumination for all jobs which need exact vision, help greatly to avoid eyestrain. Improper lighting shortens the duration of all normal seeing. The same holds true for flickering light which is disturbing to the eyes. In very bright light tinted or dark glasses give protection. Sunlight, and artificial light glaring into the eyes or reflected from bright surfaces is harmful to the eyes. Glare interferes also with clear vision.

A fisherman suffered for months from headache in the late afternoon which bothered him remarkably and reduced his efficiency. He made all sorts of trouble responsible for these unpleasant headaches such as a previous sinus trouble, insufficient sleep, fatigue and exhaustion. No treatment was of any avail. Finally an eye doctor found out that the fisherman had developed a medium degree of nearsightedness. Correct glasses were prescribed,—and the headaches ceased immediately.

(Continued on page 42)



Shrimp boats at Brunswick, Ga.

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Pacific-Type Seining for Menhaden Found Feasible

"Jeff Davis" Arranged for Both Shrimping and Menhaden Fishing

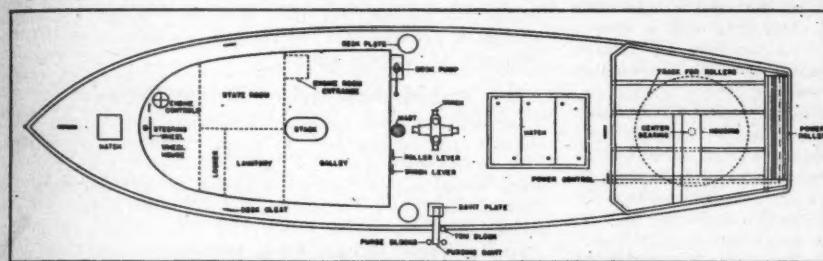
In attempting to find a means of more fully utilizing the resources of the menhaden fishery, the Fish and Wildlife Service conducted an investigation in 1944 to test the possibilities of using a modified shrimp trawler for part-time menhaden seining. The 65' *Jeff Davis*, powered with a 115 hp. Caterpillar Diesel engine, was obtained for the experiment and equipped to fish with Pacific-type purse seine.

The space below deck, measured along the deck line fore and aft was forecastle 16', engine room 13.5', fish hold 24', lazaret 10', allowance for stem bulkheads and transom 1.5'. This division of space provided accommodations for eight men below deck; an adequate engine room and sufficient buoyance aft to support the seine, turntable and a hold full of fish.

Increased cabin space was provided by moulding the sides of the house to conform with the outline of the deck. By doing this, galley accommodations were provided for 10 men and adequate space remained for a wheelhouse, lavatory facilities and



The "Jeff Davis" with net arranged for setting.



Deck plan of the 65' experimental boat "Jeff Davis".

a state room for two persons. The deckhouse, 20' in length and 15' maximum width, was located well forward and terminated near midships.

Special equipment necessary to operate the purse seine included the pursing winch, purse davit and turntable. Attachments were available to convert the winch for trawling and the turntable need not be removed to engage in that fishery.

Topside steering and engine controls are essential for purse seining from the main vessel, and are advantageous whenever special maneuvering is necessary. Without the unrestricted view thus provided, it would be difficult to find the fish, to determine the characteristics of the schools, or to set the seine. Most of the larger shrimp vessels could be adapted to seining for food

fish and have sufficient capacity without alterations below deck.

Two flat bottom skiffs were used to assist in operating the seine. These were of substantial construction with heavy frames and the bottom planking running fore and aft. The larger or "seine skiff" was used to start the net off the table, pull corks on the fish bag end and support the net while hauling and bailing. The smaller skiff was used as a "striker boat" and to assist in supporting the cork line while bailing.

The manner of setting and hauling the seine was quite similar to that used on the Pacific Coast. The seine was circled around the school of fish by the large vessel with the seine skiff acting as a drag initially to start the net off the turntable. Upon completing the circle, the skiff end was taken aboard the vessel and the bottom of the net closed or pursed. The net was then hauled onto the turntable and the fish concentrated in the bunt where they were bailed aboard with a dip net.

No difficulty was experienced in surrounding menhaden with the type of seine used on the *Jeff Davis*. Certain precautions, however, were found advisable. While the school was being inspected, the vessel remained or circled at a distance of 200 to

(Continued on page 30)

Left, the purse winch, pursing davit and "tom" weight. Right, hauling the purse seine on the turntable.



Louisiana Shrimper Has Removable Cargo Tank

The all-steel shrimp trawler *Ethel H.*, first of nine of its type being built by Avondale Marine Ways, Inc., Westwego, La., was recently placed in operation at Morgan City under command of Capt. Blue Terrebonne. She is owned by Dr. O. J. McMillan of New Orleans.

Designed and built by Avondale for use in deep Southern waters the *Ethel H.* is 65' x 18½' x 9' with a displacement of 62½ tons. Several new features of design and construction might well warrant classifying her as the "latest thing" in shrimp trawlers.

Shrimpers have always been wary of the idea of using steel in the building of shrimp trawlers because of what they term "shrimp acid", which, coming from the heads of the shrimp packed between layers of ice in the hold, is slowly corrosive of steel.

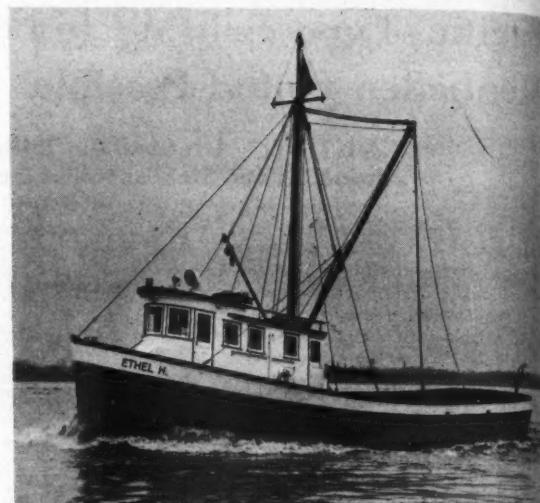
The builders of the *Ethel H.* have overcome this difficulty in three ways. First, the cargo tank is removable in order to facilitate any repairs that may eventually become necessary and to make future replacements possible; second, the interior of the hold has been sprayed with Monel metal; third, a sump tank beneath the cargo tank, entirely separate from the bilge, has been incorporated in the vessel, so that shrimp acid does not come into contact with the hull. The sump tank is drained by a different pump from that used for the bilge. The cargo tank is insulated with cork and mastic, an asphalt emulsion, and has capacity for 204 barrels of shrimp.

Her main engine is a 135 hp. D17000 Caterpillar Diesel which turns up 900 rpm. Fitted with a Twin Disc 2:1 reduction gear, this engine turns a 46 x 32 Columbian propeller through a 3" steel shaft with a Goodrich Cutless rubber stern bearing to provide a speed of 11.2 mph. There are two fuel tanks, each holding 985 gals., enough to make feasible a 20-day stay at sea, much longer than the usual 7 or 8-day run.

A crew of four is carried although there are accommodations for five, with two bunks in the fo'c'sle and three in the cabin.

Well equipped in all ways, the vessel has a 750 watt Onan generator, 2" Gould centrifugal pumps, 150 amp. hr. Exide batteries, a Hallicrafters radiotelephone, two 2½ gal. foamite fire extinguishers, two 100 lb. Danforth anchors and a Webb-perfection galley range. A 3-drum Stroudsburg hoist, mounted aft of the deck house is driven by the engine through a Twin Disc power take-off. The boat was painted with Devoe & Reynolds paints and uses RPM Delo oil.

At the present there are eight additional trawlers of this type under construction at the Avondale yard. The first two vessels are being built for the Productos Congelados Co., Guymas, Mexico and will be powered with 120 hp., 8 cylinder, 6½ x 8½, 720 rpm. Lorimer engines with a Joes reverse gear. The other six vessels have not been definitely allocated to the



The 65' steel shrimp trawler "Ethel H." built by Avondale Marine Ways, Inc. for Dr. O. J. McMillan, New Orleans.

prospective owners, but they will be powered with model MRDB, 8 cylinder, 132 hp. Superior engines with 3:1 reduction and reverse gears.

Seek Removal of Shrimp Ceilings

Complaining that black market operations in the shrimp industry are causing such an acute condition that operators who endeavor to abide by the regulations are in danger of being forced out of business, a group of packers recently requested the Houma-Terrebonne, La., Chamber of Commerce to petition Washington for removal of OPA ceilings on shrimp.

Emile Lapaire, shrimp packer, said that elimination of OPA control would result in the benefit of all concerned, including the consumer. He predicted that any rise in prices would be short-lived, and the law of supply and demand would soon solve the problem on an equitable basis.

Biloxi Made Port of Exit

A special order has been issued by the Department of Wildlife and Fisheries, after agreement with the Mississippi Seafood Commission, establishing Biloxi, Miss., as a port of exit for salt water shrimp exported from Louisiana.

The port was established for the economical transportation of shrimp exported and for the convenience of owners and operators of freight boats. Export of shrimp will be permitted only by freight boat carriers belonging to or operated by Louisiana and Mississippi citizens or corporations, coming within the reciprocal agreement entered into between the two states in May, 1940. The port of exit in the past has been exclusive to Grand Pass, La.

Gulf Fish Products Established

Gulf Fish Products, Inc., recently was established at Cameron La., with George R. Wallace, Morehead City, N. C., as president. Construction of the new plant is expected to be completed by May 1.

The Corporation will be managed by Jack Styron, and will employ between 40 and 50 people. A few boats from the Wallace Fisheries, Morehead City, will be used at the Cameron plant.

Fisheries Bills Killed

Four "tidewater bills" which had been passed by the Mississippi Senate were killed recently by unfavorable reports of the House Committee on Fisheries, Commerce and Shipping. One of the bills would have increased the membership of the Mississippi Seafood Commission from five to seven members, with provision that both management and labor be represented.

The other three were designed to restrict the area in which private oyster beds may be planted, and to make all oyster beds public planted more than 200' beyond mean low water. The present law gives riparian owners the right to beds 50' from shore.



Interior of the shrimp hold in the "Ethel H."

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Fishery Council Stages Cooking Demonstration

During the week of February 25th to March 1st, inclusive, a daily series of demonstrations of fish and shellfish cookery was conducted jointly by The Fishery Council and R. H. Macy Co., New York's largest department store. Frances Cabot, home economist for The Fishery Council, conducted the demonstrations, which were enthusiastically attended, in Macy's Home Center.

Considerable interest was shown in the simple and quick cooking methods, developed in The Fishery Council test kitchen by Miss Cabot. By following these simple methods, it insures the housewife of easily and consistently preparing a high standard, delicious fish dinner.

The value of fish cookery demonstrations and accurate fish cookery directions can not be too strongly emphasized. Many of the women in attendance said that they enjoyed fish immensely in regular seafood restaurants but when they tried to serve the same dishes at home, following the information heretofore available to them, the results were something less than satisfactory.

Emphasis was also placed on the short cooking time for shellfish such as shrimp, lobsters, etc.

Many different varieties of fresh and salt water fish were displayed to help women identify them and to permit them to ask questions about them. The Fishery Council has found out that one of the most important reasons that more widespread use is not made of the available varieties is that the average housewife knows too little about most of the lesser known varieties. As a matter of fact, few women are familiar with more than six or eight varieties. By introducing these varieties to her, greater interest in fish, generally is evidenced.

Several thousand sets of time and temperature charts for broiling, baking, steaming, etc., were distributed. By following these simple, concise directions it is almost impossible for a woman to serve a poorly cooked fish meal.

Bills Before New York Legislature

A bill providing for increased fees for shippers' permits was introduced in the State Legislature recently to end the threatened shift from the Conservation Department to the Health Department of certain controls over shellfish activities. A spokesman for the Long Island Fishermen's Association, which announced its determination to oppose any such change in shellfish control, disclosed that since the bill for increased shippers' fees was introduced, all efforts by recreational groups to separate certain phases of sanitation work from the Conservation Dept. have stopped.

The main objection of commercial interests to the proposed shift, according to the Association's viewpoint, is that the Health Department allows chlorinating plants to pour millions of gallons of polluted water into Long Island bays.

At the present time, the conservation fund amounts to \$35,000 annually, of which only \$10,000 is contributed by shippers; the balance coming from fresh water anglers, and trappers. This fact was the chief reason for the attempted shift in control.

Among other bills pending is one which would increase the legal size limit on flounders from 6 to 8", while the weakfish limit would be increased from 9 to 10".

Another bill provides that oysters in excess of one bushel shall not be taken, possessed or transported from public or unleased lands by any boat unless the propeller has been removed and a permit has been issued by the Bureau of Marine Fisheries authorizing its operation.

A fourth bill provides that only vessels owned and operated by residents of New York shall use beam or otter trawls or tow any type of net in the waters west of a line running from the east end of Plum Island to the north end of Gardiners Island; west of Gardiners Island; and in the waters west of a line running from the south end of Gardiners Island to Goff Point.

Still another bill would make it unlawful for any person at any time to sell or offer to sell any hard shell crab measuring less than 5" across the shell from tip to tip of spike, any shedder or peeler crab measuring less than 3" or any soft shell crab measuring less than 3 1/2".

As the law now reads it is unlawful to have in one's possession crabs smaller than the size limit. If the new bill passes, the law will relate only to the sale of crabs.



Miss Frances Cabot, home economist of the Fishery Council, conducting fish cooking demonstration at R. H. Macy's store, New York City.

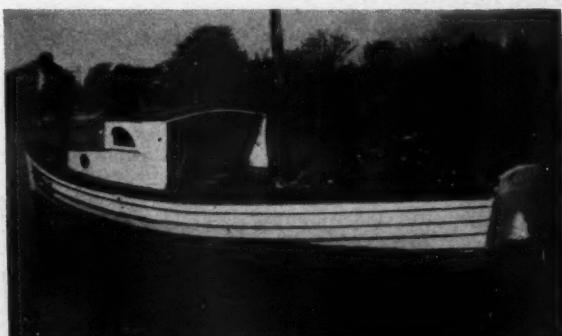
To Hold Intercoastal Conference

At a meeting held in New York on February 13, the Executive Committee of the Atlantic States Marine Fisheries Commission voted to ask the States representing the Pacific Coast, the Gulf Coast and the Great Lakes to send representatives to an intercoastal conference in Washington to be held the first part of May to discuss Federal-State relationships in the fishery field including matters of jurisdiction brought to the front by possible post-war treaties and President Truman's proclamation of September 28, asserting for this country jurisdiction over fisheries "contiguous to its coast" and beyond the traditional three-mile limit.

The Executive Committee has announced the appointment of a Technical Advisory Committee composed of leading scientists from the various State conservation departments, universities, marine laboratories and the fishing industry to act in co-operation with the Commission's official technical advisers in the Fish and Wildlife Service. The Committee also voted to seek funds for several research fellowships in various aspects of fisheries conservation.

Discuss Dredging of Peconic

The benefits that would accrue to Riverhead and Riverside through the dredging of Peconic River and the need of such improvements were stressed at a public hearing conducted at Riverhead recently by United States Engineers. It is proposed to dredge a channel 100' wide and 6' deep at low tide from the Town Dock to the mouth of the River east of Indian Island Point, a distance of about 2 3/4 miles. At present the width of the channel in many places is only about 50', and at low tide the depth approximately 2'. Many of the commercial boats that use the river draw from 2 to 5' of water.



The 28' sea skiff "Shirley" owned by W. L. Wetach, Oceanside, N. Y. and skippered by Capt. Bob Homan shown coming in with approximately 2000 lbs. of mackerel. She fishes 700 fathoms of nets and is powered with a 125 hp. Hercules gasoline engine turning an 18 x 14 Columbian wheel.



The 56' x 16' "Shangri-La" owned by E. J. Pacetti, St. Augustine, Fla. Using a 120 hp. Caterpillar Diesel with Twin Disc reduction gear she swings a 42 x 32 Columbian propeller to give a speed of 14 mph. The vessel is painted with Pettit paint.

Florida Favors Control By Agriculture Dept.

Transfer of all commercial fishing activities to the Department of Agriculture was urged in a resolution adopted February 17 at Jacksonville by officers and directors of the Florida Commercial Fisheries Association. The resolution, copies of which were sent to the Reorganization Committee and the National Fisheries Institute, points out that all Federal responsibility for foods has been delegated to the Department of Agriculture. According to Association officials, the fishing industry represents the only food not handled by the Department.

Other business at the meeting included announcement of the resignation of A. J. Robida as president. Mr. Robida has accepted the position of general sales manager with Atlantic Coast Fisheries Co. W. S. Plasandale of Miami was elected to succeed him as president.

L. C. Yeomans of Crystal River was named head of a seven-man committee delegated to meet in the near future with Governor Millard F. Caldwell, the State Supervisor of Conservation, and other officials on the Governor's staff, to rewrite existing laws and draft new legislation pertaining to the conservation of fish. Also named to the committee were Max Swartz of Miami; Louis Fischer, Cocoa; Charles Raffield, Panama City; Earl Morris, Welaka; Tom Smoot, Fort Myers; and Harry McCreary, Tarpon Springs.

A. M. Adams of Key West and Max Meyer of Jacksonville were named to the Association's Board of Directors, and approval was given to the appointment of Lieut. Col. George Deiter of Columbia, S. C., as executive secretary of the Association.

Fishermen's Co-op Formed

A group of commercial fishing boat captains working out of Snug Harbor, Madeira Beach on the Gulf of Mexico, and nearby ports, recently formed the Fishermen's Co-op, with a capitalization of \$100,000. The organization will engage in the taking, buying, and selling of seafood. The Co-op will also deal in supplies for boats, and will make loans to members of the organization.

Temporary officers were elected, as follows: Capt. Fred L. Ermish, president; Beverly C. Jones, secretary; and Howard H. Pinkerton, treasurer.

Record Sponge Sale Made

Sponge sales at Key West for February 22 totalled \$14,954.44, with sheepwool sponges bringing more than \$35 a bunch. Capt. James Gibson and his crew of six received \$6,085.88 for their catch, the highest sale ever made by a single boat. Capt. Nelson Spencer received \$4,599.99 for 131 bunches.

Most of the boats are still kingfishing, and fishermen probably will not turn to sponging until the end of the fishing season.

Loopholes Prevent Enforcement

Blaming legal loopholes in fishing laws for the failure of State Authorities to stop destructive types of netting in Lee County salt waters, Paul Thompson, district special agent for the State Board of Conservation, stated that any neck of water can be effectively stopped by nets without violating the law. The law defines the illegal form of netting as stretching from shore to shore. By allowing a few feet of water on either side of the net, the law can be evaded with enormous hauls resulting.

Gill nets of more than 350' in length are banned except for mackerel and mullet. Under this exception, it is necessary for officials to prove that nets are not being used for these two species.

A Sarasota County law prohibits the use of a net within 100 yards of the shore except during the mullet season. Since there is no effective closed season on mullet, the law is useless.

North Carolina Shrimpers Making Good Catches

Some of the larger North Carolina shrimp trawlers have made between three and four hundred dollars recently for only three or four days of operation. The trawler owned by Sandy Simmons of Southport brought in shrimp valued at \$300 for only three days of work, and some of the bigger boats did even better than that.

During prewar years practically all of the boats in use were small and unsuited to go out in the average weather that prevails during January, February and March. As a result, the shrimp season usually closed the end of December.

However, shrimp trawlers now in use can go out in almost any kind of weather except actual storms. As a result, shrimping is becoming a year-round industry, with fishermen making good wages at times when they would normally be idle. Due to the fact that the boats are working farther offshore, the shrimp being taken this year are larger and of better quality than usual.

Re-enters Shark Industry

Capt. Cecil Nelson of Morehead City has re-entered the shark fishing industry, and plans to start construction of a packing house on Crab Point soon. He will use 2 boats and employ approximately 10 men.

Sharks are found in North Carolina waters from April to December, after which they go south. Most shark fishing is carried on off Cape Lookout to outside the breakers at Atlantic Beach.

S. C. Expects Good Shad Run

Applications for permits for shad nets are being received daily since the South Carolina shad season opened, according to John M. Witsell, chairman of the State Board of Fisheries. Mr. Witsell said that although floods are expected to hamper fishermen somewhat, a good season is expected. Shad may be taken only three nights a week—Tuesday, Wednesday and Thursday.



The 30' x 10' "Beverly Grace", owned by George L. Barnes of Miami, Fla., is powered by a Chrysler Crown engine with 1.43:1 reduction gear, and has a speed of 15 mph. She fishes for mackerel, mullet and pompano.

Virginia Seafood Study By Council Proposed

A thorough study and survey of the Virginia seafood industry by the Advisory Legislative Council was proposed to the General Assembly recently in a joint resolution. The Council would be directed to complete its study and make a report to the Governor not later than September 1, 1947, along with any proposed legislation necessary to carry its recommendations into effect.

Under provisions of the resolution, the Council would be directed to give particular attention to the following: laws and regulations affecting the industry; methods of enforcing the laws and regulations; the general policy of the State in relation to the conservation and protection of the natural supply of seafood; the enlargement and development of the industry; the administrative agency charged with the regulation and development of the industry; license fees and taxes charged those engaged in the industry; and the proper co-ordination of the marine laboratory at Yorktown with the seafood industry and the administrative agency.

Also introduced were two bills regulating the use of dredges in taking oysters from natural rocks in the Potomac River. One of the bills permits the use of power dredges, not to exceed 50' in width and 75 lbs. in weight, and boats not to exceed nine net tons. Dredging would be permitted between October 1 and March 31, and crews would be limited to three persons.

The other bill deals with regulations regarding the culling of oysters. The minimum length of marketable oysters is defined as 3" from the hinge to the mouth side of the shell.

Like all legislation affecting fishing in the Potomac, the bills would not become operative until Maryland adopted paralleling legislation.

Commission Discusses Haul Seines

After considerable discussion at a meeting of the Virginia Fisheries Commission on February 26 it was unanimously agreed that the Commission has no authority to issue fixed berths for haul seines, and that, in the future, inspectors could not issue such licenses.

A discussion was held on moving the pound net line, which now extends as far as Jamestown Island, to Claremont. It was suggested by Charles M. Lankford, Fisheries Commissioner, that the matter be brought up in the forthcoming Legislature.

Seafood Flown to Detroit

Twenty gallons of oysters and 4 lbs. of crabmeat from the J. S. Darling plant, Hampton, were shipped by plane from Norfolk to Detroit, Mich., on February 14 in a test conducted by Wayne University in co-operation with the Fish and Wildlife Service. The oysters were packed in pliofilm bags enclosed in pint-size waxed containers, and were placed in a chilled room for over-night precooling. The chilled oysters were then packed in insulated fibre-board boxes.

The seafood was shipped without benefit of ice, and it was found upon examination that the temperature had increased only $\frac{3}{4}$ degree Fahrenheit for every hour in transit.

Crab Fleet to Be Larger

The return of Tangier servicemen has made the outlook for crabbing this Spring and Summer brighter. According to reports, as many as twenty new vessels will be added to the crabbing fleet. If the season is good, it is expected that the Tangier catch will be approximately 30% larger than that of last year.

Some Shad Being Taken

Small catches of shad were taken by Mathews and Gloucester fishermen the end of February, and Bayside reported some fairly good catches of rock. Herring also are being brought in. Remembering last year, which, taken as a whole, was perhaps the most generally prosperous in the memory of most commercial fishermen, work is being pushed to get equipment ready for the coming season.

Requests Lease for Seafood Plant

J. C. Lore of Solomons, Md., has requested a five-year lease with the right to 3 five-year renewals on a 200' frontage of the



The 78' trawler "Lawson" owned by J. J. Lawson & Son, Hampton, Va. She is powered by a 240 hp. Fairbanks-Morse Diesel engine and equipped with an R.C.A. direction finder, Jefferson Travis radiotelephone, Fathometer, and Hathaway deck gear.

Newport News boat harbor, for construction of a \$25,000 seafood packing plant. The new plant, which would employ 75 to 80 persons, would have accommodations for the packing of oysters, crabs, and other seafoods.

Norfolk Area Landings

Norfolk area landings for the month of February were 4,359,000 lbs., which represents a jump of 568,000 lbs. over January landings, and an increase of 1,197,000 lbs. over February, 1945 landings. Scup landings, which totalled 1,143,000 lbs., were the largest of any species, followed by butterfish with 829,000 lbs., and croakers with 580,000 lbs. All landings were from druggers.

Big Rockfish Haul Made

Approximately 40,000 lbs. of rockfish were taken with haul seines from the Pooquoson River on March 7 by Hammond West and George Firth. According to V. E. Watkins, who operates a fish dock at Bennett's Creek, not only was the catch the largest ever known to him, but approximately one third of the fish ranged from 42 to 46 lbs.

Alabama Legislation Enacted

Among laws pertaining to the fishing industry which recently have been enacted by the Alabama State Legislature is one which creates within the Department of Conservation a game, fish and seafoods fund; lists the tax and other sources from which its revenue shall come, and provides for its administration by the Director of Conservation.

Another law defines wholesale, retail and non-resident dealers in fresh salt-water fish and fixes a license fee for each class. Special consideration is provided for non-resident fishermen who are residents of a State having a reciprocal agreement with Alabama.

A third law gives the statutory provisions relating to culling oysters upon their natural beds or reefs, with the proviso that those under 3" in length be thrown back, applicable only to those taken from public reefs. Owners of private reefs are directed to notify the Department of Conservation before taking any oysters from such private beds or reefs.

Still another law rewrites present oyster tax legislation, and imposes a 3-cent tax on oysters taken from public beds, bottoms, or reefs in the waters of Alabama. It requires that 30% of all shells removed from public reefs, beds and bottoms be replanted. A person, firm, or other organization is permitted to arrange for the Department of Conservation to replant shells, provided a tax plus cost of replanting is paid. Revocation of license and other penalties are provided for failure to replant within a stipulated time, and special provisions are made for owners or lessees of private beds, reefs or bottoms.

Maryland to Investigate Decline in Shad

Maryland State officials and members of the Fish and Wildlife Service held the first of a series of conferences on February 19 to prepare tentative plans for a fisheries research program, especially as concerns means of increasing shad production, and plans were made for tagging shad en route to their spawning grounds. In 1890 approximately 12,000,000 lbs. of shad were caught in State waters, but in 1940 production dropped to approximately 500,000 lbs.

A Board of Natural Resources spokesman said that preliminary studies indicate that since 1941, when the State restricted the number of shad nets, the amount of shad escaping to spawn in rivers has increased. With each return to the spawning grounds, the weight of the shad increases considerably.

Request Funds for Laboratories

Plans have been submitted to the Maryland Commission on Postwar Reconstruction and Development by the Department of Research and Education for a new research building to cost \$62,000. The proposed new building would provide much-needed laboratory space for the co-operative seafood research programs being undertaken by the Department and the Fish and Wildlife Service.

A committee also will appear before the Board of Public Works to request an allotment of funds to set up the first unit of a laboratory at Crisfield for technological research. The unit will be a branch of the University of Maryland, and it is expected that the Federal Government will be represented in the undertaking.

Bay Unsuitable for Shrimp

In answer to a suggestion by Governor O'Conor of Maryland that Chesapeake Bay be stocked with shrimp for commercial catching, Elmer Higgins, Chief of the Division of Fisheries, Fish and Wildlife Service, said that the Bay is unsuitable for shrimp. Natural barriers, such as the temperature of the water, are probable reasons why shrimp have not accumulated there, Higgins said. Transplantations of wildlife have often been tried, but are rarely successful, he added.

May Study Croakers

Numerous inquiries received during the past year from fishermen concerning croakers have stimulated considerable interest in the species, and it is expected that the studies which were initiated several years ago at the Chesapeake Biological Laboratory may be reopened. Croakers are present in Maryland waters only during the Summer. They enter the Bay in the Spring and migrate to warm offshore waters during the Fall and Winter.

Young croakers, averaging only about 1 1/2" in length, have been collected in the Bay during the Winter by means of a specially designed small-mesh otter trawl. Little is known of the croaker's history from that time until it appears in commercial catches at a length of about 6 or 7".

A few years ago croakers were practically worthless, and fishermen shovelled them overboard. Gradually the demand began to rise, until today croakers are one of the most valuable fishes of the Chesapeake Bay.

Forbush Yard Opens Machine Shop

The Forbush Shipbuilding Co., Crisfield, has erected a marine machine shop adjoining their shipyard, with Luther Johnson and Luke Maddrix, marine machinists, in charge. The shop handles marine engines and other marine equipment.

New Rock Hall Ice Plants

John Walter Scoone & Sons, one of Rock Hall's largest seafood buyers, is building a \$50,000 ice plant, to be completed by the opening of the Summer fishing season. The plant will supply watermen as well as packers. Messrs. Ivens and Hudson, who own several oyster houses, also have constructed an ice plant, for use in their business.



The 44' shrimp boat "Elaine B." owned by Capt. Bert Alfred Blume, Galveston, Tex. She is equipped with a 65 hp. Lathrop engine, uses Gold Medal nets, Columbian rope and Gulfpride oil.

Texas Expects Good Shrimp Season

Bait shrimp boat operators, who are permitted to use trawls in bays and inland waters during closed seasons, report that the Spring shrimp run shows good prospects of being above normal. Some two or three weeks before March 1, opening day of the new season, reports began coming in from the bait crews that they were catching large shrimp in their nets. It was reported that one fisherman made an 8,000-pound catch. If the shrimp prove to be plentiful, shrimpers will have a good season.

Two Boats Run Aground

The snapper boat *Isabel* and her crew of three, six days overdue, were located on the Mexican Beach approximately 120 miles south of Port Isabel. The vessel, which is owned by the Deep Sea Fish Co., Port Isabel, developed engine trouble and grounded. The boat was towed into port by the *Mackerel*, owned by Charlie Goolsby.

The 48' *Gulf Queen*, owned by C. C. Richardson of Port Isabel, went aground on Padre Island Beach on February 16, 40 miles north of the Coast Guard station. The vessel, skippered by Bob Call, was returning from the Aransas area, where it had been engaged in shrimping, when the engine failed.

Drive Against Pollution

The Game, Fish and Oyster Commission is conducting a drive against pollution of Texas waters by oil tankers and other large oil carrying vessels. Corpus Christi, Port Lavaca, Galveston and Texas City are among the Gulf ports where pollution is said to be most serious. Captains of boats violating the pollution laws are liable to arrest, and their companies are responsible for fines up to \$1,000.

The Commission has placed an order for a new 60' boat with a speed of 12 knots for use in patrolling Gulf waters. Ernest O. Wemeyer, Commission Superintendent of the Coastal area extending from Palacios to Port Isabel, stated that game wardens are planning an active fight against illegal net fishing, especially in the Laguna Madre section.

Funds for Intracoastal Canal

The Civil Functions Appropriations bill of the War Department, recently introduced in Congress, includes a \$2,030,000 allocation for a continuation of the dredging of the Corpus Christi-Port Isabel extension of the Louisiana-Texas Intracoastal Canal, and \$100,000 for the Brazos Santiago Harbor project.

Yet to be dredged is the connecting link between the north and south sections and the extensions through the Arroyo Colorado from Laguna Madre to Harlingen. The bill, if passed, would provide funds for this uncompleted section.

Great Lakes to Test Rearing Methods

At a meeting held on March 5, the Michigan Conservation Department voted in favor of its Fish Division's recommendation that hatchery programs for Great Lakes warm water fish be curtailed in favor of habitat improvement. Among species which will be affected are bass, bluegills, perch and pickerel. The Department previously has approved curtailment of its hatchery program for trout.

The action will make available a number of rearing ponds at various State hatcheries for experiments on the rearing and planting of panfish. The Department also plans to ascertain whether the planting of fish in a lake where a certain species is already established is harmful, if predatory fish planted in an overcrowded lake reduce the surplus for the benefit of survivors, and whether fertilization of under populated areas will increase the number of fish without resorting to planting.

The Commission rescinded an order issued in 1943 banning the taking of mussels for a five-year period, and approved the pending treaty between the United States and Canada.

Predict Heavy Smelt Runs

Smelt are running under the ice of Saginaw and Tawas Bays in such large schools that northeastern Michigan fishermen are predicting heavy runs after the Spring break-up in the streams along Lake Huron and the two Bays. One ice fisherman said that the water appeared black with smelt as far down as it was possible to see.

Lake trout were taken in large numbers in Crystal Lake last year for the first time, but smelt were scarce. This year smelt are more plentiful, but the supply of lake trout is deficient. About half the smelt caught are running small, while the remainder are good-sized.

"Liberty" Freed from Ice

The icebreaker *Mackinaw* freed the fishing tug *Liberty* from an ice jam off North Manitou Island, Mich., on March 8. The bow of the vessel had been crushed by floes, and the crew stuffed mattresses in the hole to keep the craft afloat. Crew members are Gordon Bennett, Robert Miller, David Miller and William Baumgardner, all of Charlevoix.

Sue Conservation Officials

Suit for \$2,345 has been filed by Ray Adair and Philip Van-Landschoot, Munising, Mich., against several Conservation Department officials as the result of recent seizures of gill nets. The nets were confiscated last November under the size standardization law.

Rough Fish Removal

Throughout the year the Rough Fish Branch of the Wisconsin Conservation Department has been removing carp from State waters and storing them in rough fish ponds at various locations in the State.

Typical of the hauls was one made last Fall when 50 tons of carp were removed from the Fox River near Omro. Thirty thousand pounds of these fish, still alive and thriving, recently were removed from the rough fish cage in the village of Green Lake, and began a 36-hour trip to New York in a specially constructed rail car.

Seining the carp out of the holding pens is one of the most difficult tasks in the shipping operation. Huge seines are strung be-



The 38' tug "Silver Spray" owned by August Jaasko and Sons and operated from Grande Traverse Bay, Lake Linden, Mich. She is powered with a 35 hp. Kermath gasoline engine turning a 20 x 18 Michigan Wheel propeller and equipped with Willard batteries.

neath the ice and are pulled by winches to a 40' square of open water at the foot of the loading platform.

The fish are loaded into large boxes, which are later dumped into aerated tanks on trucks. The fish are then hauled to Ripon, where they are placed on special railroad cars for fast shipment east.

Owned by a New York fish concern, the cars contain a series of tanks connected to a pumping system which bubbles air through the water to keep the fish supplied with oxygen during the trip. One car will handle approximately 35,000 lbs. of carp. Previously carp were frozen and shipped in boxes, but the present method has proved more satisfactory.

Fifteen years ago the State appropriated \$75,000 for the rough fish removal program, but with the New York market the carp removal projects have become self-supporting. In addition to supplying food, the removal program has improved fishing in the State by promoting the growth of underwater vegetation on which the carp formerly fed.

Recently Enacted Legislation

Included among recently enacted Great Lakes Legislation is a law passed by the Illinois Legislature which allows the use of seines for catching certain previously prohibited species. The new law makes it unlawful to operate commercial tackle unless immediately after each seine-haul those species of fish which cannot be legally taken with the tackle are removed and returned to the water. It also requires commercial fishermen to keep a record of their catches and report them to the Department of Conservation.

The Wisconsin Legislature has passed a law which repeals the time limit for setline licenses, and requires all fishermen having such licenses to report amounts and kinds of fish caught to the Conservation Department.

Ice Hampers Dunkirk Fishermen

Although the commercial net fishing season at Dunkirk, N. Y. officially opened March 8, ice in Lake Erie kept fishing boats in port. Fishermen see little prospect of starting to fish before the first week in April.

It is expected that at least 8 boats will be engaged in fishing this year. Many of Dunkirk's largest boats have wintered up the Lake, and will follow the ice pack down.

Booth Introduces New Process

Booth Fisheries Corp., Chicago, has introduced a patented breading process, used in preparing frozen fish fillets. Vitamins and juices are sealed in, and all odor is avoided, thus making it possible to keep fillets in the refrigerator with other foods.



The 40' "Clydie C.", owned by Clyde Cross of St. Joseph, Mich. She is powered by a 150 hp. Cummins Diesel, and uses Shell oils.

Maine Landings Break All Value Records

Maine landings for 1945 totalled 199,292,942 lbs. valued at \$12,106,699, breaking all-time records for value. Production showed a 25 million pound increase over 1944, while value was \$3,238,887 ahead of last year. Although most species of fish and shellfish displayed substantial advances over 1944 levels, the lobster catch proved to be the most outstanding with a 30% increase in poundage and a 60% advance in value. In 1945 Maine trapmen hauled 19 million lbs. of the shellfish, worth \$7,938,524, whereas in 1944 the take totalled only 14 million lbs. valued at \$4,675,290.

Other species showing increases were round whiting, which increased from 1,700,000 to 3,900,000 lbs.; large cod from 3 million to 4 million lbs.; redfish from 24 million to 27 million lbs.; and herring from 71 million to 79 million lbs.

Among the newer species of fish and shellfish, tuna displayed a marked increase from 317,660 lbs. in 1944 to 404,761 lbs. in 1945, valued at \$89,047. Most of the tuna was landed in Sagadahoc County. Maine fishermen took more than 1/2 million lbs. of shrimp, and mussel production was 12 million lbs., valued at \$60,000.

In terms of production by counties, Hancock led with 56 million lbs., Washington was in second place with 48 million lbs., while Cumberland was third with 45 million lbs. More than one quarter of the total 1945 landings came from Hancock County ports.

Fisheries Commissioner Richard Reed said that increased lobster production and higher prices are attracting more fishermen and dealers into the business, which he believes will mean that the Sea and Shore Fisheries Department will have to protect the supply of lobsters through strict enforcement of conservation laws and added emphasis on propagation.

Plan Air Transportation of Lobsters

Air Lanes, Inc., of New York and Rockland, a recently organized concern composed of 10 ex-servicemen, has purchased 200' of property on the Rockland waterfront for the purpose of operating a general wholesale lobster business. Construction will be started soon on a one-story 40' x 60' building to house storage facilities for 25,000 lbs. of lobsters.

The firm plans to make two daily flights to New York, and has leased waterfront facilities on Long Island Sound for the construction of lobster pounds, from which the shellfish will be transhipped to all points in the country. Actual buying and shipping operations are expected to start in May.

Officers of the Corporation are as follows: David Couture, of the Coast Guard at Brunswick, president; L. E. Barker, Springfield, Mass., treasurer; and Clyde S. Young of Rockland, clerk. Mr. Young, a lobsterman of many years' experience, will serve as operational manager of the Rockland and New York plants.

Big Rockland Landings

Nearly a half a million lbs. of fish were landed at Rockland the week of March 4. Included among good trips landed at the O'Hara plant were the following: *Ethel C.*, Capt. Edward Ames, 81,515 lbs.; *Iva M.*, Capt. Jay Murphy, 61,872 lbs.; *Jeanne D'Arc*, Capt. Carl Reed, 65,661 lbs.; *Helen Mae II*, Capt. Frank Ross, 78,670 lbs.; and *Little Growler*, Capt. Walter Ross, 65,000 lbs.

Sardine Industry at Standstill

The sardine industry was at a standstill early in March, with none of the plants receiving any amount of fish. The season opened with a very promising outlook and all factories received large quantities of good quality fish, but stormy weather has broken up the herring schools.

Launch Sardine Carrier "Ida Mae"

The sardine carrier *Ida Mae* slid down the ways of Southwest Boat Corp., Southwest Harbor, Me., February 17. Owned by Stinson Canning Co., Prospect Harbor, Me., the boat has an overall length of 73', 17'4" beam, and 6' draft.

Designed and built by Southwest, the *Ida Mae* has nice lines



The 73' sardine carrier "Ida Mae" being launched by Southwest Boat Corp., Southwest Harbor, Maine.

and is well equipped. The main engine is a Fairbanks-Morse 4-cylinder 120 hp., model 35F Diesel, fitted with a Maxon silencer and turning a Columbian propeller. For auxiliary use, Fairbanks-Morse 5 hp. Diesel engine with a 3 kw., 115 volt generator has been installed.

Other equipment consists of Exide batteries, a model HDA 110 volt Ideal electric winch, Kelvin-White compass, Edson steerer, Mischniana lube oil filter and Kraissel fuel oil strainer. She uses MacMillan Ring-Free oil and is painted with International paint.

Maine Seafoods to Build New Plant

Maine Seafoods, Inc., of Portland, is planning construction of a new \$20,000 fish plant on Brown's Wharf. The structure will be 100' x 55', and will be erected on the extreme end of the wharf.

The Corporation began its first operations in its present location on Brown's Wharf, in the buildings which formerly housed the Booth Fisheries. Ralph W. Hanscomb, former manager of the Atlantic Lobster Co., Rockland, and of the Willard-Daggett lobster plant at Portland, is president of the firm.

"Sandra & Jean" Sold

The 65' dragger *Sandra & Jean* which had been running out of Rockland under the command of Robert Anderson, has been sold to John B. Bindloss of Stonington, Conn., from where she is now operating. The boat was built by Southwest Boat Corp., Southwest Harbor, last year and is equipped with a 170 hp. Buda Diesel.

Waldoboro Building Two Lobster Boats

Waldoboro Shipyard, Waldoboro, is building a 28' lobster boat for Norman Hatch of Saugus, Mass., and a 32' boat for Falmouth Lobster Co., Falmouth Foreside, Me., a new concern recently formed by Peter Genesse and Hiram Dexter. Both boats will be powered with a 6-91 Gray engine.

Lobsters Flown to New York

Five thousand lbs. of lobsters were flown from the Augusta State Airport to New York on February 13 by the Air Care Transportation Corp., which hopes to inaugurate daily flight between Maine and New York soon. The lobsters were supplied by Rackliff & Witham Co. of Rockland.

Another 5,000-pound shipment of lobsters was flown from Portland to New York the following day.

"Vagabond" Towed to Port

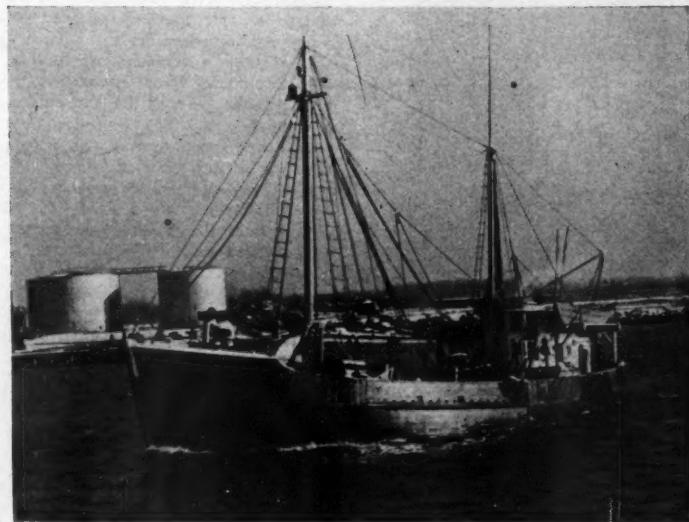
The 90' dragger *Vagabond*, skippered by Julius Iverson, was towed into Portland by a Coast Guard cutter on March 3 after drifting for 50 hours following engine breakdown off Mt. Desert Island. The vessel, which is owned by Lawrence Scola of Portland and works for the Mid-Central Fish Co., was recently refitted after having been released from the Navy.

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Attending ceremonies at Boston Fish Pier as a new insulated seafood shipping trunk was dispatched to Florida were, left to right: Dana Ward; Leonard F. Whidden, general agent, Railway Express Agency; C. Russell Allen, Eastern Wooden Box Assoc.; and A. F. Morey, Fish Pier agent of Railway Express. Heavily cork-lined and utilizing dry ice as a refrigerant, the wooden returnable bulk container is designed to extend the range of fresh fish shipments and reduce retail prices by eliminating expensive, one-trip containers. It was developed by Mr. Ward in cooperation with the wooden box industry of New England.

Pacific-Type Seining for Menhaden

(Continued from page 21)

300 yards from the spot. After the determination to set had been made, the headway of the vessel was increased to the desired setting speed and this was maintained until the circle was nearly complete. It was found that suddenly starting the propeller in motion or increasing the engine speed would disturb the fish. A tendency for menhaden to move away from the vessel was noted on days when they were restless. As setting the seine continued, the fish appeared to make a smaller circle than the boat and to return to their original location when the circle was completed.

As had been expected, the menhaden exhibited a tendency to swim into the net and, because of their numbers, to submerge the cork line sufficiently to permit the escape of a large share of a catch. The effect of this tendency was decreased by the use of more and larger corks and by increasing the rate of pursing of the cork line. Just prior to the conclusion of the investigation, the cork purse line, together with its accessories, was extended to permit pursing of the entire cork line.

A guard from the skeg to the horn timber is essential to prevent the netting from tearing on the skeg and rudder when the menhaden strike the net during the pursing operation and while hauling. The guard was constructed of $1\frac{1}{2}$ " square wrought iron. A brace between the horn timber and the guard was installed to minimize the vibration induced by the propeller stream. No guard was necessary around the propeller, for when one blade was down, the entire propeller was well outside the line of netting from the side of the vessel to the skeg.

The most evident advantage of the Pacific Coast method is the low initial investment for the vessel. The *Jeff Davis*, complete with all equipment including the winch and turntable, was built at less than the expense of a single complete overhaul of the hull of the usual menhaden vessel.

Under normal conditions, with an 11-man crew well versed in the handling of the gear, it is estimated that operating a seine from the main vessel and bailing a catch of 100 M would require not over $1\frac{1}{2}$ hours. A crew of 22 operating the usual equipment and gear under similar conditions would require approximately one hour. Thus, the man-hours required per set are considerably less for the Pacific type seining method. A wider stern would permit a longer power roller and con-

sequently increase the purchase on the net and improve the angle from which it is hauled. Also, far more working space and freedom of movement would be permitted in hauling the fish bag half of the net.

During the operation with the *Jeff Davis* some difficulty was experienced with the purse line fouling the net. The major source of this fouling appeared to be caused by the V-type purse bridles. Sets made in depths of three fathoms and over seldom were troubled with fouling difficulties. When tangles did occur, they could be readily freed by pursing as much as possible and then lifting the entire bottom of the net aboard and clearing it.

All experience during the progress of the work indicated that the shrimp trawler hull with the transom stern is a versatile type suitable for operating a Pacific type purse seine. When the vessel was loaded, the transom stern did not create undue drag, the normal nine-knot cruising speed was reduced by only one knot. The butt ends of the planking at the stern should be protected by a lead or sheet iron strip or hardwood to absorb the chafing occasioned by the skiffs and loaded vessel coming along side. The transom stern should be double or triple planked to assure sufficient strength and tightness when the vessel is loaded.

When purse seining for menhaden with a larger vessel, the "tom" weight must be much heavier than that used with the two purse boat method. The weight on the *Jeff Davis* weighed nearly 600 pounds. During periods of rough weather or when unusually heavy schools of fish were surrounded, the increased pursing strain tended to lift the "tom" weight and the pursing operation had to be momentarily stopped to allow the weight to sink. A heavier "tom" weight of 800 to 1,000 pounds could be used to overcome this difficulty. A small davit resembling a purse boat davit should be more practical for handling weight of this size.

A vessel operating a menhaden seine should be equipped with a gypsy on the bow and a lead block to power purse the section of the cork line. The stern pursing can be accomplished by installing a lead block on the corner of the table over the stern and leading the line to a winch gypsy through a lead block. By this method, the cork line can be pursed as rapidly as the bottom line, if so desired, by only two men. After the power pursing has been completed, it would be the function of the seine skiff and the striker-boat men to secure the cork purse rings to their skiffs and back haul the purse lines to have them in proper order for hauling.

Certain modifications were made on the Pacific Coast type seine used on the *Jeff Davis* in order to render it more practical for capturing menhaden. At the start of the investigation, it was believed that the maximum fullness of hanging which could be conveniently handled by eleven men was about 15 fathoms of stretched measure netting hung to ten fathoms of line. Subsequent experiences proved that a seine with full hanging could have been used. In order to provide the large bag of netting necessary to restrain the menhaden, a cork purse line 100 fathoms long was used on the fish bag half of the seine. Pulling on this line uniformly decreased the size of the cork line circle and thus greatly increased the amount of netting per unit of distance around the circle. This performed a function similar to gripping the net as practiced in the menhaden fishery. By means of this device, two men in the skiff could pull far more corks in a given time than five men on the stern of the large vessel without a similar purse line. There was never any tendency for menhaden to submerge the portion of the net equipped with this line, but it was quite difficult at times to keep the other half of the cork line afloat.

The purse seine used on the *Jeff Davis* was of more than adequate length to encircle schools of menhaden, but it is believed that the depth of the net should not be less than 10 fathoms. Practical experience disclosed that a net of 10 fathoms in length would have been adequate as in nearly all sets 20 fathoms or more of the seine remained unset above the turntable.

Pacific Coast sardine practice is to support the fish bag by the large seine skiff and the large vessel while bailing. Sufficient cork line and netting are allowed between the bow and stern of the seine skiff and the vessel to form a square to accommodate the fish while bailing. The position of the skiff is maintained by an auxiliary boom fastened to a strap near the rail between two side stays.

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Gloucester Seiners Start South for Mackerel

The 1946 mackerel seining season got started the middle of this month when the *Santa Maria*, fleet high-liner for the last two years, the *Antonina* and the *Bethulia* headed South. They expected to start landing catches at Cape May, N. J. The size of the early Spring fleet has been growing smaller since the fish usually are not found in large quantities during March. About a dozen more boats are being readied to leave for seining early in April.

Several Good Trips Landed

Recent good trips landed at Gloucester include the following: *Killarney*, Capt. Albert Williams, 200,000 lbs.; *Curlew*, Capt. Robert A. Fralic, 185,000 lbs.; *Rita B.*, Capt. Andrew Deder, 100,000 lbs.; *Pilgrim*, Capt. Joe Jaqueta, 160,000 lbs.; *Colombia*, Capt. Bert Hemeon, 220,000 lbs.; *V-E Day*, Capt. Lemuel Barnes, 190,000 lbs.; *Philip & Grace*, Capt. Joe Caramararo, 140,000 lbs.; *G. N. Soffron*, Capt. Ivan Williams, 105,000 lbs.; *Florence & Lee*, Capt. Cecil Moulton, 200,000 lbs.; *M. C. Ballard*, 147,000 lbs.; and *Rainbow*, Capt. Reginald Pike, 110,000 lbs.

The new dragger *Manuel P. Domingos*, Capt. Fernando Pereira, landed her maiden trip of 36,200 lbs. at Fulton Market on February 13.

Three Vessels Change Hands

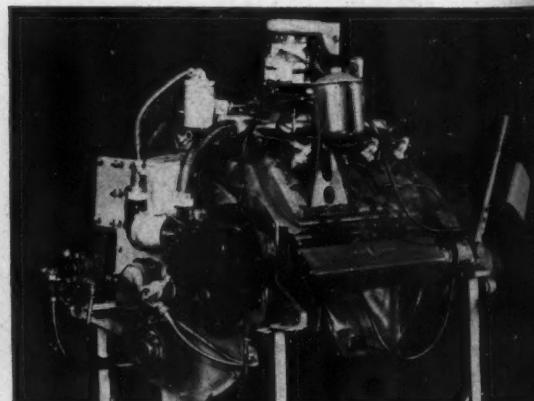
Rocky Bay Fish Co. has purchased the 92' dragger *Dartmouth* from Capt. Herman of New Bedford. The vessel, which was built 6 years ago, has a capacity of 125,000 lbs. She served in the Navy during the War, and was skippered by Capt. Ray Kershaw of the *Little Joe*, then a Navy Lieutenant-Commander.

Capt. Joe Sinagra has purchased the dragger *Huntington* from Capt. Herman, and is going on her as skipper. Capt. Sinagra formerly skippered the *Frankie and Rose*. Capt. Byron Lee Parsons has bought the *Gertrude DeCosta*. He plans to go long stringing for halibut before the swordfish season begins.

Two Boats Repowered

The seiner *California*, Capt. Fillippo Cusumano, has been equipped with a new 171 hp. Buda Diesel with Twin Disc 30 reduction gear and power take-off, 50 x 48 Columbian propeller, Morflex coupling, Gross raw water strainers and Willard 32 volt batteries.

The gill netter *Naomi Bruce III* owned by Capt. Henry Shoares is being repowered at Robinson Marine Basin with a 171 hp. Buda Diesel with 2:1 Twin Disc reduction gear and 48 x 48 Columbian propeller. Both engines were sold by Rapp-Huckins.



The Oscor V-8 shown here was especially designed for use during the war as a cruising propulsion engine in Vosper PT boats and, in addition, to operate hydraulic gun pumps (turret, radio and radar generators, generators for main ship's battery system and hydraulic steering pump) and also a large bilge pump. Installed in pairs these auxiliary propulsion engines were equipped with 2:1 reduction gears which in turn drove through additional 2:1 reduction gears (built into the main engines) to the main propeller shafts.

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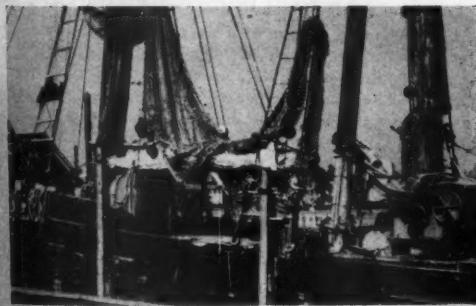
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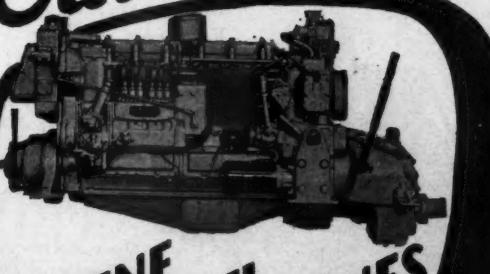
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Connecticut Tests Winter Oyster Transplanting

A series of experiments conducted recently by Dr. V. L. Loosanoff of the Fish and Wildlife Service Milford, Conn. Laboratory has demonstrated that extreme caution should be exercised in handling and transplanting oysters when the temperature is below freezing.

An analysis of the experimental data showed that the majority of oysters, if frozen but left undisturbed until they thaw, will survive. However, if frozen oysters are exposed to shaking, shovelling or any other rough type of handling, heavy mortality will occur. In some experiments, 100 per cent of the oysters, which were first frozen and then shaken in an oyster basket, died. Almost all the animals in another basket, which was not shaken, were found alive upon thawing, and six weeks after the end of the experiment were still in an apparently healthy condition.

Because of the comparatively high salt content of the blood of oysters they do not freeze until the temperature is several degrees below the freezing point. The meats of oysters remained unfrozen when exposed for several hours to a temperature of 28°F. However, below this temperature oysters freeze quickly, especially if they came from relatively brackish water.

The shells of frozen oysters were found to be extremely brittle. Therefore, even if a small percentage of frozen animals survives the effects of handling, the shells of these oysters may be so seriously damaged that it would later result in the death of the mollusks.

The following rules were issued for transplanting oysters during the winter:

1. It is preferable not to allow oysters to freeze while they are on deck, as the vibration caused by the engine may be sufficiently strong to cause injury.

2. If because of an unforeseen change in the weather, oysters freeze on deck while in transit, they should not be handled until they thaw out. In some instances, it may be practical to pump sea water over the pile of frozen oysters to accelerate thawing. Avoid use of a stream of water that is too strong.

3. Refuse to buy seed oysters which may have been handled in a frozen condition. Carefully examine oysters purchased during the Winter. Oysters that have been previously frozen and killed by handling will be found slightly gaping, provided that at the time of examination the air temperature is high enough to allow the oysters to thaw.

Two Boats Being Repaired

The 65' *Charlotte*, largest boat in the Stonington fleet, is in the ways at Post's Shipyard in Mystic for repairs. The vessel sprung a leak while fishing off No Man's Land the latter part of February. She is skippered by Jack Lima, has a crew of four, and docks at the Longo dock in Stonington.

The *Russell S.*, another Stonington fisherman, is in for repairs under the direction of her skipper, Carl Johnson. She broke her boom recently while fishing.

"Five Sisters" Ready to Fish

The 46' dragger *Five Sisters* has had her trial tests, and is ready to join the Stonington fishing fleet. She is skippered by Capt. James A. Hunt, with a crew of Jack Sullivan and Jim Paolini.

The 57' dragger *Barracuda*, owned by John Vierra, has just been launched by the Stonington Boat Works. Alfred Robell of Stonington is having a 61-footer built in West Haven.

Portland Landings — February

(Hailing fares. Figure after name indicates number of trips)

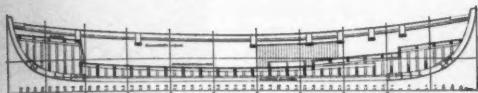
Alice M. Doughty (1)	18,000	Fordham (1)
Alice M. Doughty II (3)	126,000	Hornet (1)
Andarte (2)	141,000	Jeanne D'Arc (1)
Annie Louise (3)	14,000	Lawrence Scola (1)
Caroline & Priscilla (2)	91,000	Lira G. (2)
Dorothy & Ethel III (3)	117,000	Nora D. Sawyer (2)
Dorothy & Ethel III (3)	133,000	Notre Dame (4)
Elin B. (1)	26,000	Onward III (1)
Elinor & Jean (2)	38,000	Richard J. Nunan (1)
Evzone (2)	144,000	Santina D. (2)
Fannie Belle (3)	42,000	Willard Daggett (4)

SEINE BOATS

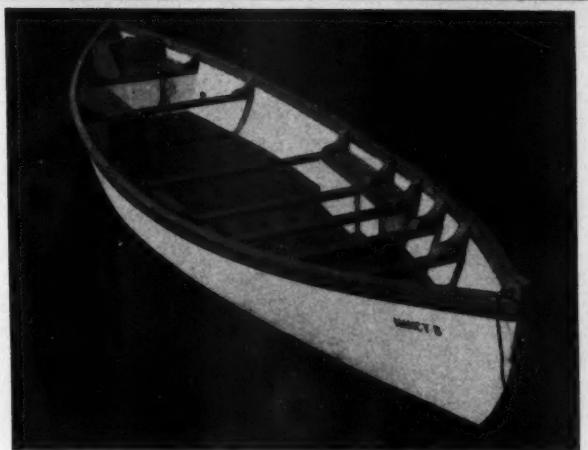
EXTRA STURDY
45 FOOTERS

BUILT FOR LONG SERVICE
UNDER ALL SEINING CONDITIONS

Our standardized seine boats are precisely built to a proven design by workmen skilled in this special type of boat construction. Owners tell us they are today's outstanding seine boat values—superior in quality and performance.



Length: 44' 10" Beam: 10' 10"
Keel and Stem: Oak Planking: 1" Cedar
Frames: Oak—1" x 2" spaced 9½" on centers
Fastenings: Galvanized boat nails clinched
Welded, one-piece stem iron and breast hook



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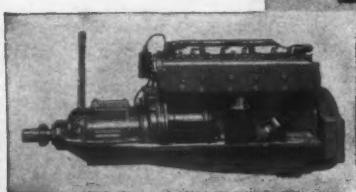
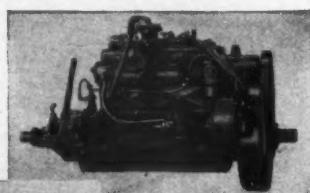


shopping for an ENGINE?

Don't pick an engine off the shelf on a self-service basis. See the Palmer Dealer in your port. It is his job to assist you in selecting the most suitable engine for your boat, to help you in the matters of shaft and wheel, foundations, etc.

Palmer Engines have always been known for their dependability, ruggedness, simplicity and long life. The new Palmer engines include all these features as well as those advantages imparted by modern engineering and improved manufacturing methods.

Look for the orange and black sign that will identify your Palmer Dealer or write us for his name and address. Any yard you designate can obtain a Palmer Engine and install it for you. The Palmer Dealer will arrange all the details. Write for Engine Bulletins.



Palmer Diesel marine and stationary engines from 9 to 60 H.P.

Palmer Built medium and heavy duty Gasoline Marine Engines 2 to 150 H.P.

Palmer P.H. Conversions 45, 75 and 120 H.P.

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MARINE ENGINES
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New Bedford Meeting Discusses Imports

Believing that the fishing industry is seriously threatened by increasing foreign imports, New Bedford City Council members voted on March 7 to request the appearance of Fish and Wildlife Service officials to explain possible solutions to the problem.

At a previous public hearing, attended by 200 persons, Edmund J. O'Neil, business agent of the Seafood Producers Association, presented a brief prepared by Lawrence J. Hart, secretary of the Gloucester Fisheries Association, for presentation at Washington and which compared the costs of producing fillets in the United States, Canada, Newfoundland, and which stressed the need for revised tariff controls. Other speakers included Normand A. Lajoie, port agent of the Atlantic Fishermen's Union; John J. Gobell, director of the National Fisheries Institute and president of the New Bedford Fillet Dealers Association; Capt. Daniel Mullins, of Mullins Fishing Gear Co., and owner of several boats; and Capt. John Murley, director of the National Fisheries Institute.

These speakers, together with representatives from other New England fishing ports, attended a Washington hearing on imports held the latter part of February before the House Committee on Merchant Marine and Fisheries.

Fish Flown to Cincinnati

A shipment of 1,500 lbs. of fresh haddock fillets was flown from New Bedford to Cincinnati, Ohio on February 18 in an experimental flight. The seafood was shipped by Superior Fillet Inc., and the flight marked the first time fresh fish ever has been sent from New Bedford by air.

Two Vessels Go Aground

Two 49' New Bedford fishing vessels, the *Barbara Tee* and the *Rose Jarvis*, went aground in fog on March 6. The *Barbara Tee*, skippered by Bertram Berg of Fairhaven, grounded approximately one mile south of Grace Point, West Island, Block Island.

The *Rose Jarvis*, which went aground at the southeast corner of Clarks Point near Fort Rodman, succeeded in freeing herself after a few hours and proceeded into port under her own power.

Request Cape Shellfish Station

Representative Henry A. Ellis of Hyannis has requested location of a shellfish experiment station on Cape Cod, one of seven the Division of Marine Fisheries proposes to establish in the State. Establishment of the stations has been urged by Ralph Osborn, Director of Marine Fisheries, as a means of utilizing shellfish areas to better advantage, and for discovering, if possible, the causes of the present shortage of shellfish.

"Addie Mae" Sold

The 56' New Bedford dragger *Addie Mae* has been sold by Ernest Murley to Anthony Maniscalco of Boston. The vessel, which was built in 1930, has a gross tonnage of 34, and is powered by a 60 hp. engine.

Seek to Open Closed Area

As the result of a meeting of Wellfleet fishermen and citizens on February 19, Charles R. Frazier, Jr., Selectman, will meet with the attorneys representing the owners of certain beach property closed to fishing, in an effort to have the area opened. Approximately 6 miles of privately-owned beach already has been closed to shellfishing, and there is a proceeding in the land court to gain title to additional waterfront property adjacent to the



Capt. Shirley Mitchell of Fairhaven, Mass., skipper and part owner of the 72' dragger "Luberry".

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BIGGER HAULS BIGGER PROFITS

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Levelometer Tank Gauges



With rugged, dependable Levelometer gauges, specially designed for rigorous service at sea, to tell you exactly how much fuel you have left, you can spend more time at the fishing grounds. More time — more fish. More fish — more profits.

The Large Model Levelometer is simple to install since all that is required within the tank is a suitable length of $\frac{3}{4}$ inch pipe. When ordering specify height of tanks and kind of fuel used.

Other Liquidometer products include: Draft Gauges, Rudder Angle Indicators, and Float-Actuated Fuel and Water Level Gauges.

THE LIQUIDOMETER CORP.

Marine Division
SKILLMAN AVE. at 37th ST., LONG ISLAND CITY, N.Y.

Island. If this additional area is closed, only a small section of beach adjacent to Truro would remain open.

A ruling has been received from Herbert D. Robinson, assistant attorney general, to the effect that Wellfleet shellfishermen have a legal right to gather shellfish along the shores provided the same is done between high water mark and the ocean. The communication stated that no one has a right to obstruct in any way this inherent right, and if any artificial obstructions are placed in the way of exercising this right, fishermen are privileged to remove them. This ruling is expected to strengthen the fishermen's position in negotiations with the owners.

Fisheries Appropriations

Orleans citizens voted \$7,000 at their Town Meeting on February 18 for the dredging of Rock Harbor Creek and the building of a section of riprap at the mouth of the Creek. This work is to be done in conjunction with the Town of Eastham, which voted \$3,000 for the purpose. The State Department of Public Works is expected to appropriate matching sums. Two fishermen, Harry C. Bonnell and Charles Francis Richardson, were appointed to serve on a committee with the Selectmen.

Twenty thousand dollars was appropriated by Chatham on February 19 for the purpose of completing the fish packing house and wharf at Aunt Lydia's Cove.

Barnstable appropriations include \$3,425 for the propagation and protection of shellfish as against \$1,177 voted last year.

Hathaway Service for Diesel Engines

The February issue of *Atlantic Fisherman* stated that W. H. White had been appointed representative for Atlas Diesels in New Bedford and that sales, service and parts departments had been established at Hathaway Machinery Co., Fairhaven.

As part of its service to the fishing fleet, Hathaway allows representatives of Atlas, Cooper-Bessemer, Fairbanks-Morse, Lathrop, Wolverine and others to make their New Bedford headquarters and receive messages at the Hathaway Office.

Hathaway also services and carries repair parts for nearly all makes of Diesel engines in stock.



You'd be amazed at what you can pick up with a Kinney Interchange Clutch! . . . it transmits power to your winch directly through rugged flat discs and not through bolts or engaging mechanism. Available in solid or split construction for easy installation. There's a dependable Kinney Clutch for every drive on your boat — auxiliary equipment, winches, hoists or main engines.

Write for Bulletin K-8

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We also manufacture vacuum pumps, liquid pumps and bituminous distributors.



A "NEW HIGH" In Fishermen's Suits

Most fishermen are well acquainted with Sawyer's long-established line of "Frog Brand" oilskin clothing. Now Sawyer offers a new companion line of rubberized clothing for fishermen — sold under the trade name of Sawyer's "Lighthouse Brand." Lighthouse Brand fishermen's clothing is "tops" because it is

RUBBERIZED RUGGED: it will withstand rough-and-tough going; has greater resistance to scuffing, snagging and tearing; waterproof throughout; withstands salt spray.

STRONG APLENTY: every seam is double-stitched and waterproofed; non-corrosive, reinforced buttons; the best buttonholes that can be made.

THOUGHTFULLY BUILT: inside storm flyfront in the coat protects against water seepage and heavy seas; corduroy collar for comfort, wear and appearance.

EXTRA ROOMY: full oversize jacket; full-waisted trousers; roomy legs 23" long.

SOFT HAT: dry, smooth, comfortable, and flexible — easily folded and stored.

PACK a "Lighthouse Brand" suit for your next trip — and you will never think of changing brands again.



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Rhode Island Acts to Protect Scallops

Protection of Rhode Island's scallop crop from some fishermen who have taken advantage of certain vague language in State laws was sought through identical bills introduced March 5 in both branches of the Rhode Island Legislature at the request of Harold N. Gibbs, chief of the State Division of Fish and Game. In order to allow scallops to attain additional growth before being taken, the proposed Legislation would change the opening date of the season from September 15 to October 1, and the closing date would be moved from January 1 to January 15. Boats would be prohibited from taking more than 15 bushels in one day plus one bushel for each man aboard up to a limit of two bushels.

Fishermen interpret existing laws as allowing each license holder to take 15 bushels a day, with the result that many boats have taken 45 to 60 bushels of scallops daily. Each resident of the State is allowed, without license, to take a bushel of scallops per day. The effect has been to clean out the State scallops in a few weeks of the season.

Under the proposed Legislation, fishermen would be required to register their boats with the State and furnish complete data on the craft. The license fee would be increased from \$5 to \$10, and the license would expire at the end of the season.

Heavy tow bars, which are said to dig into the bottom and damage the scallops, would be banned. The use of more than eight single dredges would not be allowed, and the blades of the dredges could not be more than 28" in width. Seven areas would be closed to power boats because of the shallowness of the water. The new law also would bar the taking of seed scallops under any circumstances, whereas the present law permits them to be taken under certain conditions.

"Klondike" Goes Aground

The 42' dragger *Klondike*, owned by Manuel Reis of Warwick, went aground off Weekapaug in a dense fog recently after her anchor chain had broken. The owner and Edward Duarte of Stonington, Conn., rowed ashore in a dory.

To Fight Pollution

A resolution was introduced recently in the Rhode Island Legislature which would direct the State Department of Health through its Division of Sanitary Engineering, to proceed without further delay with rigid enforcement of the State's anti-pollution laws. The bill directs the Division to put into effect a planned, comprehensive enforcement of the law, and it requests the Governor to seek the cooperation of the Federal Government and the Commonwealth of Massachusetts to eliminate any source of pollution from outside Rhode Island.

New Jersey Association To Build New Dock

The Surf City Baymen's Association met recently at Tuckerton to make plans for the erection of a new dock to enable them to better carry on their business of fishing and clamming. The dock is to be constructed by the baymen themselves.

The following were elected to serve as officers of the Association: president, Ellis Brown; vice-president, Eugene Ragg; secretary and treasurer, Robert H. Everett.

Bill Would Restrain Amateur Clammers

A bill was introduced in the New Jersey Senate recently which would require any person who takes oysters or clams in excess of 100 in any one day from any of the natural oyster or clam grounds of the inland waterway to obtain a State license. It also would prohibit persons who do not have a license from selling, offering for sale or keeping for sale the clams they catch.

The purpose of the bill is said to be to prevent "amateur" clammers from engaging in business in competition with those who have State licenses. At present there is no limit to the number of clams that may be taken by either a licensed or unlicensed clammer.



Chrysler Powered Log Patrol

Five sturdy craft, all powered by Chrysler Marine Engines, comprise the Puget Sound Log Patrol. They're a hard-hitting team that pulls logs, many of them deeply imbedded in the sand, from the beaches of Puget Sound and tows them against strong tides and currents to storage yards at Seattle, sometimes 100 miles distant.

"To roll or drag logs from the beaches, we open the engine wide and give the tow line a terrific jerk," says Richard Daves, owner of the Tickaboo. "We often keep this work going 15 or 20 hours a day without shutting off the

engine. I'm glad our boats all have Chrysler Marine Engines."

Chrysler Marine Engines are designed, engineered and built exclusively for marine use. They are not assembled or converted, not rebored or rebuilt engines.

If you are buying a new boat or re-powering your old one, be sure to see your Chrysler Marine Engine dealer or send the coupon for catalog which shows complete power ranges.

MARINE ENGINE DIVISION, CHRYSLER CORPORATION

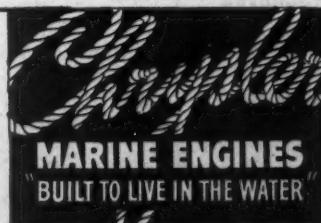
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ACE • CROWN • ROYAL • DIESEL
80 to 141 Maximum Brake Horsepower

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"SAFE HARBOR" FOR Power Boat Owners

At ports and terminals throughout America, Chrysler Marine Engine dealers maintain a parts supply as well as complete engines of varying horsepower to meet your needs.



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ANCHORS

★ More Holding Power
★ Half the Weight
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HOW TO TEST THE HOLDING
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EDSON NON-CHOKABLE BILGE PUMPS

Hand Operated in Four Sizes

The EDSON Corporation

49 D Street Phone 3041 South Boston, Mass.

New York Landings—February

(Hailing fares. Figure after name indicates number of trips)

Amelia (2)	87,000	Martha E. Murley (3)	36,000
Buzz & Billy (2)	44,000	Mary (2)	23,000
Catherine C. (3)	53,000	Mary Anne (2)	79,000
Catherine L. Brown (2)	76,900	New Dawn (1)	12,000
Doris Gertrude (1)	6,000	Norseman (1)	18,000
Edith L. Boudreau (1)	43,000	Olive M. Williams (1)	20,000
Elsie M. Jeffries (1)	16,000	Olivia Brown (3)	84,000
Emily Brown (2)	72,000	Pilgrim (1)	12,000
Felicia (2)	40,500	Puritan (2)	52,000
Florence B. (3)	71,000	Rosalie F. (2)	33,000
Gloria F. (1)	18,000	S #31 (2)	23,000
Holy Family (1)	27,000	Sunapee (1)	24,000
John G. Murley (2)	65,000	Thomas J. Carroll (2)	65,000
Katie D. (2)	139,500	Tins B. (2)	46,000
Lady of Good Voyage (3)	96,000	Viking (3)	43,400
Magellan (1)	17,000	Virginia (2)	150,500
Manuel P. Domingoes (1)	36,200	Whaling City (1)	19,000

Kilberry Made Nordberg Official

Nordberg Manufacturing Co., Milwaukee 7, Wis., has announced the election of F. H. Kilberry to the position of Executive Vice President and director.

Kilberry was previously president of Atlas Imperial Diesel Engine Co., Oakland, Cal., having joined that Company in 1928.

Clinton E. Stryker, formerly vice president and assistant to the president of Nordberg, has been elected president and general manager of Adel Precision Products Corp., Burbank, Cal. Adel is now manufacturing an Isodraulic remote control system for operating marine clutches, throttles and steering mechanism and other hydraulic units.



F. H. Kilberry

Diesel Engine Design and Operation

(Continued from page 18)

with each cylinder jacket. The cooling water is forced to the top of the jacket, flows into the cylinder head, thence through the exhaust valve cage to the exhaust manifold jacket and from there to the overboard discharge. Separate branches lead the water to the pistons, air compressor jackets and coolers, cross-head guides, thrust bearings and tunnel shaft bearings; also to the oil cooler if this is employed. All these branches except those to the pistons discharge through the same overboard discharge valve, the piston water being discharged into the bilge.

In more elaborate cooling systems, fresh water is used in a closed circuit, that is, it is used again and again. It passes through the engine jacket and then through the coils of a heat interchanger, which are cooled by water taken up from the sea in which the ship is floating. The outside water does not come into contact with the engine, only with the interchanger coils, and this eliminates whatever salt, sand and foreign matter which is usually present in sea water from being deposited in the engine cooling circuit and leaving scale on the hot surfaces preventing the transfer of heat.

In a modern water cooling system of the latter type a centrifugal pump circulates fresh water from a reservoir usually mounted at the upper right of the engine, through the water jackets around the engine cylinder and about the fuel oil feed and return lines. This water is cooled by means of a heat exchanger, which in turn is cooled by a rapid forced flow of sea water from a gear pump generally mounted at the left of the engine. The heat exchanger is similar to an automobile radiator, with copper passages through which the hot fresh water flows rapidly under pressure from the centrifugal pump while the sea water flows around the tubes. In a single-cylinder engine the fresh water system has a capacity of five quarts and in a six-cylinder engine 28 quarts. Circulation of this water is controlled by a thermostat in the fresh water line, and there are two zinc electrodes in the heat exchanger unit to dissipate and absorb stray electric currents in the external lines exposed to sea water.

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Boston Trawler Tie-Up Remains Unsettled

Negotiations toward ending the 10 weeks' tie-up of the Boston trawler fleet are said to have broken down completely, with no settlement in view. The dispute centers around the Union's request for an increase in the crew's share of earnings from 50 to 60 percent. However, Irving Usen, owner of three trawlers, agreed to the Union demands for a 60-40 lay, at the same time resigning from the Federated Fishing Boats of New England and New York, Inc., which represents the owners.

Approximately 200 Boston trawler fishermen were reported to be working on New Bedford vessels and 75 on Gloucester craft, many of them rotating trips with the regular dragger crews. The Union is now endeavoring to find berths for additional Boston men who are idle because of the tie-up.

Reid Building Lobster and Trap Boats

Reid's Shipyard Inc., Winthrop, is building a 40' trap boat which will be operated off Nahant by Bluejay Fish Trap Co. of Boston, and will be powered by a 104 hp. Chrysler Crown engine with 2:1 reduction. The yard also is building a 36' lobster boat for John Murphy, Medford, and James Durant, Everett, which will have a 125 hp. Gray engine.

Recently Enacted Legislation

Included among laws affecting the fisheries which have recently been enacted by the Massachusetts Legislature is one which re-defines "fish" to include any animal life inhabiting the ocean or its connecting waters. Formerly only animal life inhabiting coastal waters was included.

The new law broadens the scope of the general laws relative to marine fish and fisheries within the jurisdiction of the commonwealth, and modifies the prohibition of willfully destroying, injuring or molesting any fishing device to exclude those acting with the consent of the owner. Fine or imprisonment instead of fine and imprisonment is provided for unlawfully having possession of quahogs or soft shelled clams less than 2" in longest diameter.

A second law permits enforcement officers of the States of New Hampshire and Rhode Island to pursue any person found fishing in the coastal waters in violation of marine fishing laws thereof onto adjacent coastal waters of Massachusetts and there arrest him and take him into such other State for the purpose of prosecuting him, provided the other State gives substantially similar authority to Massachusetts.

Another law exempts scallops from certain provisions of the marine fishery laws relating to contaminated areas.

A fourth law provides for an investigation by a special commission of the means of increasing the supply of shellfish, the propagation of soft shelled clams, and relative to shellfish chlorinating plants.



ALL STYLES AND SIZES

It's easy to tell a good fish hook — the point stays sharp and the hook holds its shape. It takes the right kind of metal and the right kind of heat treating to make such a hook — and DeWitt knows how to do it.

That's why fishermen all over the world are using DeWitt American-Made Hooks for a surer catch at a lower hook cost per season. Whatever styles and sizes of hooks you use, you can get them — good hooks — from DeWitt. Try them. You'll like them.

Write for catalog and quotation
on your season's supply of hooks.
Please give the name of your supply
house. Address Dept. A.

DeWitt
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FISH HOOKS



Bill DeWitt Baits Auburn, N. Y.

DIVISION OF SHOE FORM CO. INC.

Lathrop

MARINE ENGINES are designed for ECONOMICAL SERVICE

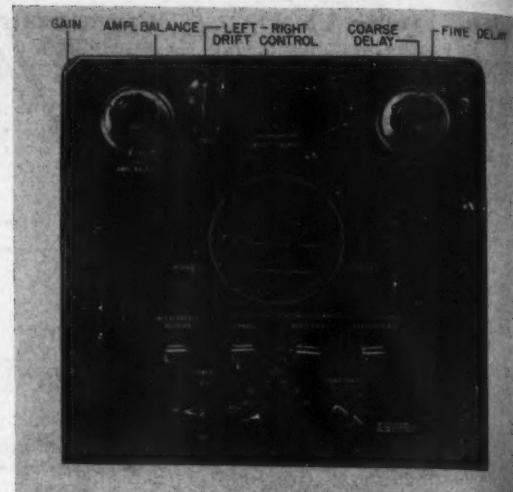


The shrimp boat "BELEM" owned by Roland Fish Company, Mayport, Florida. One of several boats powered with Lathrop Diesel engines, she is equipped with a Type D-50 Diesel, turning a 28" diameter x 16" pitch propeller.

BOTH the Diesel and gasoline models of Lathrop engines give real operating economy. Not only are fuel costs low, but also maintenance expense, which means freedom from costly delays and tie-ups. This is because Lathrops are strictly marine engines, ruggedly built for years of hard service. Whether you plan to buy an engine for a new boat, or for repowering your present boat, you should investigate the advantages of Lathrop.

THE LATHROP ENGINE CO.
MYSTIC, CONNECTICUT

Marine Engine Builders Exclusively for 49 Years



Sperry Loran instrument panel.

Loran Long Range Navigation

Loran, electronic "stop-watch" which makes it possible to determine quickly and accurately the position of a ship at sea, will be standard navigational equipment on ocean-going vessels by 1950, it has been predicted by Omar B. Whitaker, marine sales manager of Sperry Gyroscope Co., Inc., Great Neck, N.Y. The first commercial installation already has been made on the Swedish-American luxury liner "M/S Gripsholm," which recently made a highly successful round-trip voyage to the Mediterranean with Loran.

The top instrument panel on the Sperry Loran shipboard receiver is only a bit more than a foot square, and contains a series of knobs used for selecting and matching two radio signals on a cathode-ray scope, and a "time-difference meter." The ship's position can be determined day or night, regardless of weather conditions, in from two to six minutes.

Loran transmitting stations, of which there are more than 40, broadcast accurately-synchronized radio "pulses" or signals continuously over most of the principal shipping lanes of the world. The stations operate in pairs, usually 200 to 400 miles apart. Range of the stations is about 750 nautical miles in daytime and about 1400 miles at night.

The original signal is transmitted by the "Master" station. The "Slave" station receives this and repeats the signal. The signals are picked up and identified on the Loran shipboard receiver, and the time difference is measured by lining up the signals visually on the cathode-ray scope. Sperry Loran computes the difference in time of arrival of the signals in one-millionth of a second on the time difference.

The navigator uses this information to determine a "line of position" on the Loran charts or from the tables. The intersection of lines of position from one or more pairs of transmitting stations gives the Loran fix.

Eye Troubles Common to Fishermen

(Continued from page 20)

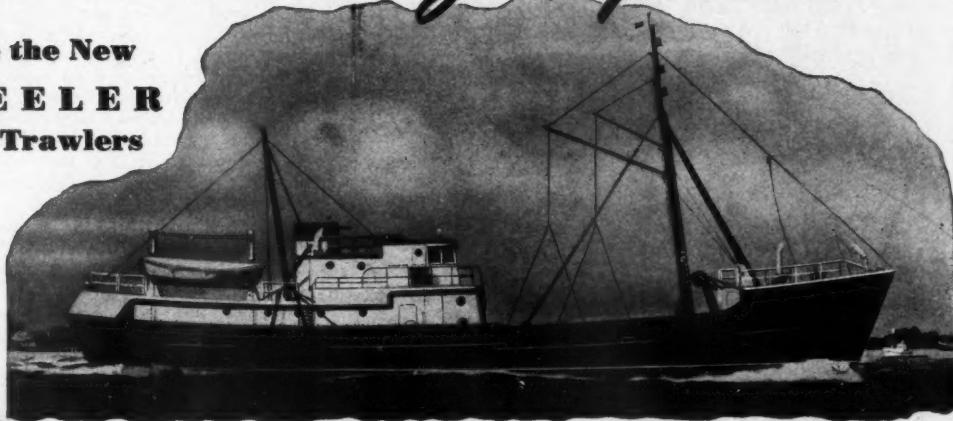
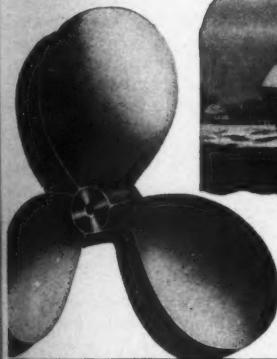
forever. Nearsightedness may produce headache as well as dizziness, nausea, the feeling of pressure in the head.

Well fitted glasses make disappear all the troubles which originate from nearsightedness,—as well as from farsightedness. Farsighted eyes cannot see the objects near at hand without giving considerable extra work to the muscles of accommodation in the eye. This often results in eyestrain and headache, but the condition can also be corrected by proper glasses.

There are some methods of treatment which try to exercise the eye muscles and strengthen the eyes in this way. Whatever the success or supposed success of those methods,—there is no doubt that any person afflicted with near or farsightedness, or similar troubles of vision has to wear glasses if he wants to do his work in the most efficient manner. Proper care can prevent unnecessary strain on the eyes and prevent unpleasant eye troubles.

Columbian Bronze Propellers

drive the New
WHEELER
 Steel Trawlers



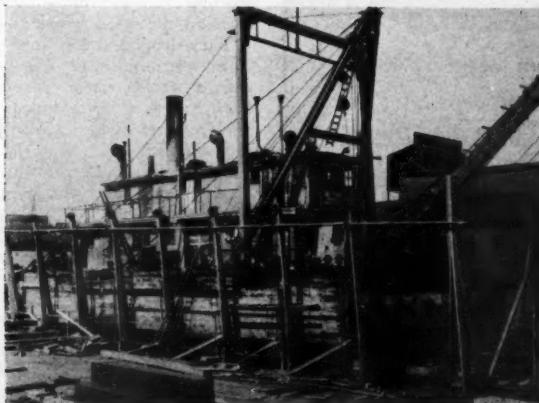
New Wheeler 132' all-welded steel trawlers, a welcome contribution to the fishing industry, are especially designed for ease of maneuvering under all North Atlantic weather conditions. They feature the latest type of fish handling equipment, improved deck arrangement, electric

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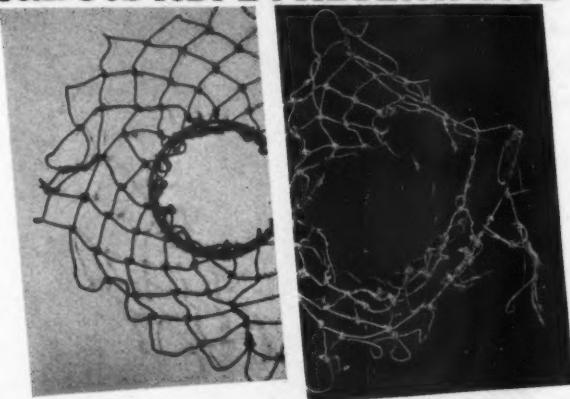
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INCREASES LIFE AND STRENGTH OF ROPE!

Especially adapted for general marine use where rope is constantly exposed to the action of air, sunlight and water, the complete penetration by Cabot's Rope Preservative.

- ① protects against deterioration caused by Ultra-Violet rays of sunlight
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Cabot's Rope Preservative is easy on the hands. Treated rope becomes dry to touch after short exposure to air. Actual tests show that after six months' exposure the loss of strength in untreated rope yarn is 59%...while rope treated with Cabot's Rope Preservative loses only 32%.

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EDERER

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540 ORLEANS ST. UNITY & ELIZABETH STS.
CHICAGO, ILLINOIS PHILADELPHIA, PA.
GLOUCESTER - BILOXI BALTIMORE - MIAMI

Vineyard Fish Scarcity Laid to Reconversion

By J. C. Allen

In keeping with everything else, we suppose that the fisheries and the weather are affected by reconversion. The Powers that Be are fond of laying everything undesirable to this cause, anyhow, and since we can't hang it on anyone or anything else, it won't hurt to add these things to the list.

What we are driving at is an approach to local conditions that won't prove to be too much of a shock to anyone who happens to read it. February is just about past the main rigging as we pen this log, and there is not too much of interest to report. As a matter of fact, we doubt if most of the gang realized that a month had passed before it had gone to sea-ward.

We have a right, as we see it, to drip with gloom and forebodings. All hands ashore and afloat, who have anything whatever to do with fish, fishing or fishermen, have that same right. And yet, being moderately honest, we are bound to admit that none of us knows what he is talking about yet.

In all seriousness, February contained some particularly tough spots, and you may lay to that. Because of these lousy up periods, confusion reigns in the minds of most of our top-line skippers, and here's why. They don't know, for example, whether the world is coming to an end or not, and if it is or isn't, they don't know whether to sit and dread it or get ready for a triumphal parade and a grand exit.

Weather Unfavorable

Here's how it all stacked up. There have been about two bearings, one wide out and the other not so wide, and maybe a spot or two in shoal water, where the gang has tried to fish during February. They have set twine, as often and as long as the Democratic-inspired elements would allow, and they have been blown to helengone as often as they have tried to fish.

Of the gang that has succeeded in remaining on the ground more than half an hour without hitting a northeaster but-once first, the haul has not been half bad. Every now and then the some bold sea-skimmer has come in, after being tossed about until he had swallowed his back teeth, but with a real job of fish in his pens. But by the same token, broken trips have been the rule, and it hasn't seemed to have mattered much whether a vessel drew 8' or 18', the result in the aggregate was just the same, which is good old Hebrew for "cussed luck".

They hauled flukes out of the Gully that measured all of 7" between the eyes. They also got some that were no larger than a watch charm. They found some flounders, of varying sizes, and they even landed a few tilefish, having ventured into bolder water than is usually fished. Inshore there were some cod and haddock, also snow, ice, blizzards, and heavy seas, which explains why the wash alongshore is filled with worn-out playing cards, with the spots polished clean off them.

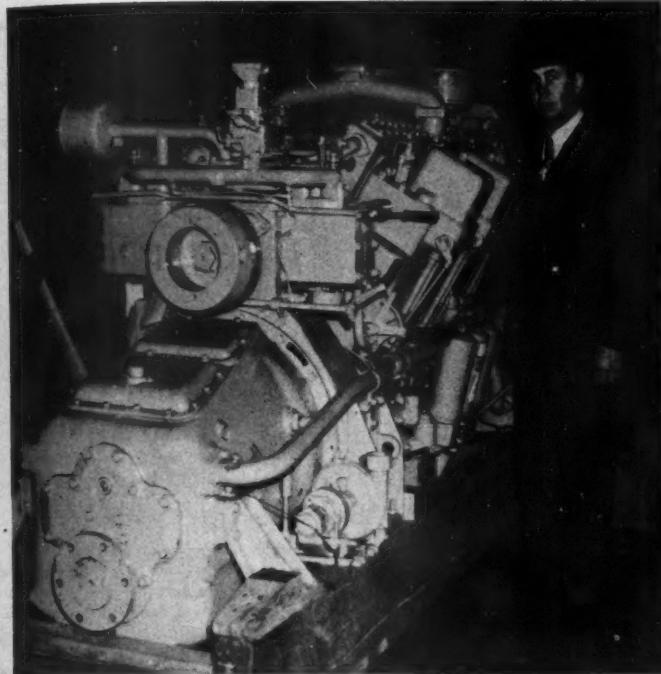
Fish May Be Scattered

Now the question is this. Are there really some fish out there somewhere, which a man could catch if he had weather or have they been driven off or caught. All this sounds a good deal like the average run of our reports for some time, we admit. We have checked our log for fourteen months back and we find this to be generally true of the period. Hardly a boat of any size, sailing from this locality, has made two consecutive, uninterrupted trips to any bearing at all, in the space of time. Wind, sea and the threat of hurricanes, or worse, have slipped in between trips to raise hell with the schedule all the time.

We just hope, along with the rest of the gang, that this year will bring a return to normal conditions. That is why we suggest that the fisheries and the weather must be undergoing the pangs of reconversion or something of the kind.

Now, so they tell us, somebody wants to declare war on Canada because she is interfering with our swell black market. All we have to say is that when the shooting starts we want to be in a good position—but we will do as we damn please about aiming and make no mistake about that.

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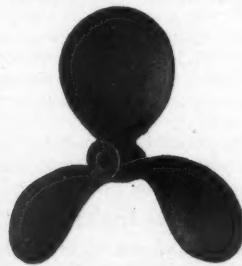
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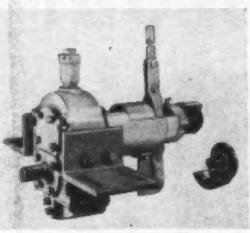
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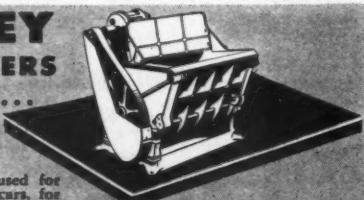


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**New Brunswick Landings
Show Value Increase**

By C. A. Dixon

Total landings for 1945 in Southern New Brunswick amounted to 907,837 hundredweights with a landed value of \$2,281,491, which represents a gain of \$192,719 over previous records. The sardine catch, which totalled 67,045 hogsheads with a landed value of \$1,106,354, was ahead of all other varieties in quantity and value. The fish were caught principally in Charlotte County, only 842 hogsheads valued at \$13,892 having been taken in other counties.

The subdistrict of East Charlotte, with landings of 28,311 hogsheads valued at \$478,588, led all others in sardine production, although fish caught in purse seines in that area were taken principally by Campobello and Grand Manan fishermen.

West Isles (Deer Island and vicinity) followed East Charlotte with landings of 16,065 hogsheads valued at \$265,000. Grand Manan was third with 12,575 hogsheads valued at \$207,812, followed by Campobello with 5,000 hogsheads valued at \$80,000 and West Charlotte with 3,384 hogsheads valued at \$55,820. The Grand Manan and Campobello totals were exclusive of fish caught in purse seines.

Grand Manan was a major source of large herring in 1945, producing 9,833 hogsheads with a landed value of \$165,440.

Value of Lobsters Doubles

The lobster catch in Southern New Brunswick during 1945 amounted to 12,562 hundredweights with a landed value of \$547,618, which was double the amount received by fishermen for their 1944 catch. The Charlotte County lobster catch was valued at approximately \$446,000, while the St. John County and City catch was valued at about \$100,000.

The Grand Manan catch totalled approximately 5,330 hundredweights valued at more than \$250,000, and accounted for nearly half the total catch of the entire Southern New Brunswick district. East Charlotte had the next largest catch, with landings of 2,577 hundredweights valued at \$123,776, followed by St. John Harbor and City with 2,672 hundredweights.

Cod, Haddock and Pollock

The catch of cod, which totalled 15,940 hundredweights valued at \$72,229, was quite equally distributed in the various subdistricts. Haddock production amounted to 6,707 hundredweights valued at \$42,249. Pollock, which staged a comeback, showed a total catch of 43,591 hundredweights, valued at \$135,876. Campobello and Grand Manan fishermen accounted for most of the catch.

Increases in value were shown in hake, smelts, clams, scallops, winkles, herring scales, salmon, shad, halibut, alewife, grayfish, sturgeon, and dulse.

High Prices for Herring Scales

Charlotte County fishermen have received as high as a pound for herring scales this Winter, or the equivalent value of from \$18 to \$20 for scales obtained from a single hogshead of sardines. It is reported that a Deer Island fisherman recently received \$500 for one day's work. Fishermen have become so encouraged that many are having new scale boats built.

New Plant at Leonardville

According to recently-announced plans, a new sardine factory is to be built at Leonardville, Deer Island. Richard East, well-known Leonardville weir fisherman, is the chief promoter of the project. The plant will be ready for operation in early Summer.

January Landings Up

Landings for the month of January in Southern New Brunswick amounted to 33,372 hundredweights with a total landed value of \$83,051, compared to 25,466 hundredweights valued at \$64,540 in January of last year. Sardines and lobsters were valued at \$48,589 and \$20,388 respectively. Scallop production was 1,085 gallons valued at \$5,044, compared to 636 gallons valued at \$2,764 in January, 1945.

Gloucester

(Hailing far-

alden (2)

alia (2)

America (2)

American Eagle (2)

Ansonia (2)

Bird (2)

Automatic (1)

Briggs (1)

Gloucester Landings — February

(Hailing fares. Figure after name indicates number of trips.)

Golden (2)	Josephine P. II (2)	112,000
Alicia (2)	Killarney (2)	243,000
America (2)	Leretha (1)	120,000
American Eagle (1)	Linta (3)	29,000
Angie & Florence (2)	Little Nancy (4)	97,000
Antonia (5)	Los Sam (3)	8,000
And (2)	Lucretia (3)	4,000
Automatic (1)	Margie and Roy (2)	2,000
Acocet (1)	Marietta and Mary (1)	35,000
Acocet (1)	Mary (5)	14,500
Acocet (1)	Mary and Julia (1)	63,000
Acocet (1)	Mary M. (2)	13,000
Acocet (1)	Nancy F. (4)	43,000
Acocet (1)	Natalie III (3)	79,000
Acocet (1)	No More (5)	8,500
Acocet (1)	Old Glory (2)	45,500
Acocet (1)	Olympia LaRoss (2)	21,000
Acocet (1)	Philip & Grace (1)	125,000
Acocet (1)	Pilgrim (1)	150,000
Acocet (1)	Polyanna (1)	35,000
Acocet (1)	Rainbow (1)	58,000
Acocet (1)	R. Eugene Ashley (1)	72,000
Acocet (1)	Rita B. (2)	152,000
Acocet (1)	Rose and Lucy (3)	67,000
Acocet (1)	Rosemarie (3)	41,000
Acocet (1)	Ruth and Margaret (2)	158,000
Acocet (1)	Sacred Heart (1)	45,000
Acocet (1)	St. Christopher (1)	72,000
Acocet (1)	St. Joseph (5)	112,000
Acocet (1)	St. Peter (2)	41,000
Acocet (1)	St. Peter II (2)	155,000
Acocet (1)	St. Providenza (2)	3,000
Acocet (1)	St. Victoria (2)	141,000
Acocet (1)	Salvatore (1)	65,000
Acocet (1)	Sebastiana C. (3)	156,000
Acocet (1)	Serafina N. (2)	42,000
Acocet (1)	Serafina II (2)	31,000
Acocet (1)	Squatum (1)	20,000
Acocet (1)	Theresa M. Boudreau (2)	116,000
Acocet (1)	Trimembral (3)	8,000
Acocet (1)	V-E Day (1)	125,000
Acocet (1)	We Three (3)	12,000
Acocet (1)		

Boston Landings — February

(Hailing fares. Figure after name indicates number of trips.)

Adventure (2)	Nina B. (2)	125,500
Brookline (2)	Ohio (1)	73,500
Chas. M. Fauci, Jr. (1)	Rosemarie M. (3)	400,500
Frances C. Denhey (1)	Texas (3)	347,500
Gertrude Parker (3)	Theresa R. (2)	93,000
Maristella (2)	Thomas D. (2)	157,500
Marjorie Parker (1)	Venture II (2)	126,000

Lectrolox Anti-fouling Coating

Maritime Laboratories, Compton, Cal. are manufacturing a new anti-fouling coating, known as Lectrolox, that protects boat bottoms against marine growth by employing an electrical turbulence.

Hard-bottom Lectrolox Coating has been developed on a principle said to be completely unlike any other marine coating or paint. It gives positive protection against barnacles and other marine life by actually repelling them while they are still microscopic in size by setting up a sustained electrical turbulence. On approaching a surface so treated, the organism, through its sensitive antenna, receives the electrical impulses which warn it away.

Lectrolox is composed of high potential metals of unlike polarity, suspended in a binder of high acid value. Millions of copper and zinc particles form the positive and negative poles, while the binder works as an insulator. Sea water functions as an electrolyte. Actually thousands of tiny primary cells are contained in every square inch of coating. Laboratory tests prove a potential measuring as high as 1:1 volts and .7 ampere per square foot.

The effectiveness of this coating is sustained until the entire supply of metals has chalked off and voltaic action has been completely expended. It is reported that Lectrolox-coated hulls which have gone more than a year between drydocking come out of the water perfectly clean and unfouled.

No special skill or equipment is required in applying the Lectrolox system of hull protection. The coatings are brushed or sprayed on like common anti-fouling paints. They set rapidly by evaporation instead of oxidation. Hard-bottom Lectrolox has the added advantage over toxic types in that, after application, the vessel may remain out of water indefinitely without harmful effect or loss of repellent efficiency.

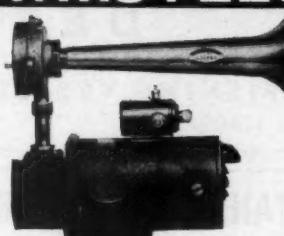
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ATLANTIC FISHERMAN, Goffstown, N. H.

New Bedford Landings — February

(Hailing fares. Figure after name indicates number of trips)

Adventurer (3)	23,500	Louise (2)	110,000
Agda (2)	16,000	Lubbenray (1)	6,000
Aloha (2)	128,000	Madeline (2)	14,000
Alva (2)	9,200	Malvina B. (1)	11,000
Anastasia E. (1)	2,500	Marie & Katherine (4)	47,000
Anna (1)	1,500	Mary & Joan (2)	21,000
Anna C. Perry (2)	5,700	Mary Grace (2)	93,000
Ann & Marie (2)	3,000	Mary J. Hayes (2)	134,000
Annie M. Jackson (1)	13,000	Mary Tapper (1)	4,000
Arnold (1)	4,000	Minnie V. (1)	4,000
Bernice (2)	3,200	Molly and Jane (3)	36,000
Camden (2)	14,000	Moonglo (1)	34,000
Cape Ann (1)	86,000	Moonlight (1)	21,000
Captain I (2)	11,000	Nautilus (1)	50,000
Catherine & Mary (2)	16,000	New Bedford (2)	27,000
Charles E. Beckman (1)	10,000	New Dawn (1)	15,000
Christina J. (1)	38,000	Newfoundland (2)	21,000
Clara T. (1)	1,200	Noah A. (1)	1,000
Clifton (1)	2,200	Noreen (2)	5,000
Clinton (1)	3,000	Novelty (1)	5,000
Connie F. (3)	26,500	Olive M. Williams (1)	14,000
Dartmouth (1)	55,000	Palmers Island (2)	5,000
Dauntless (3)	64,700	Pearl Harbor (3)	55,000
Diana A. (2)	116,000	Pelican (2)	70,000
Donald & Johnny (2)	11,800	Phyllis J. (3)	7,000
Doris (1)	2,500	Priscilla (Chilmark) (2)	13,000
Edith (3)	9,000	Quest (1)	34,000
Elenore K. (2)	6,500	Renata (3)	34,000
Elva (1)	6,000	Richard and Arnold (2)	1,000
Elva & Estelle (2)	8,000	Ronald & Dorothy (1)	1,000
Etta K. (3)	30,000	Rose Jarvis (2)	1,000
Eunice-Lilian (1)	50,000	Rosemarie V. (1)	1,000
Fairhaven (2)	105,000	R. W. Griffin, Jr. (2)	10,000
Four Sisters (2)	23,000	Sankaty Head (1)	4,000
Fred Henry (3)	12,500	Sea Hawk (1)	4,000
Gay Head (2)	48,000	Skilligolee (1)	4,000
Grazing (3)	6,000	Solvej J. (2)	7,000
Growler (2)	33,000	Southern Cross (3)	11,000
Gull (2)	6,400	Stanley B. Butler (3)	21,000
Hilda Garston (2)	172,000	The Friars (1)	11,000
Janet & Jean (2)	15,000	Tiptop (1)	4,000
Jerry & Jimmy (2)	28,000	Trio (3)	13,000
J. Henry Smith (1)	500	Ursula M. Norton (2)	13,000
Joan & Ursula (2)	54,500	Viking (1)	13,000
Josephine & Mary (1)	77,000	Venture I (2)	6,000
Junojae (2)	206,000	Virginia & Joan (1)	3,000
Kelbarsam (3)	17,500	Wamsutta (1)	3,000
Kingfisher (1)	9,000	Wanderer (1)	2,000
Liberty (2)	16,000	Whaler (3)	16,000
Lt. Thomas Minor (1)	11,000	Winifred M. (2)	14,000
Louis A. Thebaud (2)	13,000		

Scallop Draggers (Landings in Gallons)

Abram H. (1)	550	Margie & Pat (1)	
Antonio (1)	900	Muriel & Russell (1)	
Bobby & Harvey (2)	1,650	Olga C. (1)	
Carol & Estelle (2)	1,200	Palestine (1)	
Dagny (1)	70	Viking (1)	
Francis J. Manta (1)	1,000	Viking (New York) (1)	
Linus S. Eldridge (2)	1,450		

Kirsten Forms Marine Division

Establishment of a marine division for the manufacture of varied marine products is announced by the Kirsten Pipe Co., Seattle, Wash., of which George Gunn, Jr. is now president.

The new division will produce a number of marine products formerly manufactured by Webster-Brinkley. Among these are the Photo-Electric Pilot, automatic steering device; the S-E-Naud, electrical clutch control; and a small electric hydraulic steerer.

A number of key engineers and production men, who formerly worked on the design and production of these products at Webster-Brinkley, are now on the Kirsten staff.

Gulf Marine Gasoline Available

The original gasoline formulated and refined especially for marine use in 1936 is again being made available to motor boat owners by Gulf Oil Corp., after a four-year interruption in production due to the war. It will be identified by the name, Gulf Marine White. This product differs from automotive gasolines in that it will not form gum in the engine tanks and fuel lines of motor craft, even after long periods of storage in dry dock or idleness at moorings. The non-gumming quality of this fuel results from its being a straight-run "pure" gasoline, taken from the heart of the crude. Its formation has put many a boat out of action, and accounts for shipyard repairs ranging from cleaning gas lines and carburetors to ripping up the decks to remove clogged gas tanks. Gulf Marine White was developed to overcome these not uncommon difficulties, which add to the uncertainty and cost of modern boating.

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YORK, N.
CLAM
Chas. D. Bratt
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St., Boston
Quaker City
CORDA
American M
Sts., Broo
Columbian
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YORK, N.
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Hunt-Spiller
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R. H. Shep
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Diehl Manu
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General Elec
Sperry Gyro
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The Buda
Caterpillar
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Corp., Se
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Enterprise
Florida S
Fairbanks
Gray Mar
troit, Mich
Joshua Hen
Kermath M
Detroit &
The Lathro
Liner-Blac
waukee,
MacL. Mich
Murphy D
Milwaukee

ALARM SIGNALS

Clark Cooper Co., 319 N. Market St., Palmyra, N. J.

ANCHORS

R. S. Danforth, 2121 Allston Way, Berkeley, Calif.

ANCHOR-GRAPNELS

Chas. D. Bridell, Inc., Crisfield, Md.

BATTERIES, STORAGE

"Exide": Electric Storage Battery Co., Allegheny Ave. and 19th St., Philadelphia, Pa.

Willard Storage Battery Co., Cleveland, Ohio.

CAN MANUFACTURERS

Continental Can Co., 100 E. 42nd St., New York, N. Y.

CLAM KNIVES, TONGS, RAKES

Chas. D. Bridell, Inc., Crisfield, Md.

CLUTCHES

Kinney Manufacturing Co., 5341 Washington St., Boston, Mass.

COLD STORAGES

Quaker City Cold Storage Co., Philadelphia, Pa.

CORDAGE MANUFACTURERS

American Manufacturing Co., Noble and West Sts., Brooklyn, N. Y.

COLUMBIAN ROPE CO.

Auburn, N. Y.

New Bedford Cordage Co., 233 Broadway, New York, N. Y.

CYLINDER LINERS, PISTONS, RINGS

Hunt-Spiller Manufacturing Co., 383 Dorchester Ave., Boston, Mass.

DEPTH FINDERS

Marine Division, Bendix Aviation Corp., Norwood, Mass.

Bludworth Marine, 100 Gold St., New York 7, N. Y.

Submarine Signal Co., 160 State St., Boston, Mass.

DIESEL AUXILIARY SETS

Detroit Diesel Engine Division, General Motors Corp., Series 71 Marine Diesel, 13400 W. Outer Drive, Detroit 23, Michigan.

Lister-Blackstone, Inc., 1706 So. 68th St., Milwaukee, Wis.

John Reiner & Company, 12-12 37th Ave., Long Island City, N. Y.

R. H. Sheppard Co., 330 Middle St., Hanover, Pa.

United States Motors Corp., 448 Nebraska St., Oshkosh, Wis.

ELECTRICAL EQUIPMENT

Diehl Manufacturing Co., 240 Congress St., Boston, Mass.

General Electric Co., Schenectady, N. Y.

Sperry Gyroscope Co., Inc., Great Neck, N. Y.

ELECTROLYSIS ELIMINATION

Hamilton Engineering Co., P. O. Box 1893, Boston, Mass.

ENGINE MANUFACTURERS

Atlas Imperial Diesel Engine Co., 115 Broad St., New York, N. Y.

The Buda Co., Harvey, Ill.

Caterpillar Tractor Co., Peoria, Ill.

Chrysler Corporation, 12211 East Jefferson, Detroit, Michigan.

Cooper-Bessemer Corp., Mount Vernon, O.

Cummins Engine Co., Columbus, Ind.

Detroit Diesel Engine Division, General Motors Corp., Series 71 Marine Diesel, 13400 W. Outer Drive, Detroit 23, Michigan.

Enterprise Engine & Foundry Co., 18th and Florida Sts., San Francisco 10, Calif.

Fairbanks, Morse & Co., Chicago, Ill.

Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.

Joshua Hendy Iron Works, Sunnyvale, Calif.

Kermath Mfg. Co., 5896 Commonwealth Ave., Detroit 8, Mich.

The Lathrop Engine Co., Mystic, Conn.

Lister-Blackstone, Inc., 1706 So. 68th St., Milwaukee, Wis.

Mack Mfg. Corp., Empire State Building, New York 1, N. Y.

Murphy Diesel Co., 5317 West Burnham St., Milwaukee, Wis.

Where-to-Buy Directory

Companies whose names are starred (*) have display advertisements in this issue; see Index to Advertisers for page numbers.

Murray & Tregurtha, Inc., 12 Hancock St., Quincy 71, Mass.

*The National Supply Co., Superior Diesels, Springfield, Ohio.

*Osclo Motors Corp., 2020 E. Orleans St., Philadelphia 34, Pa.

*Palmer Bros. Engines, Inc., Cos Cob, Conn. Red Wing Motor Co., Red Wing, Minnesota.

*Wolverine Motor Works Inc., 1 Union Ave., Bridgeport, Conn.

Worthington Pump & Machinery Corp., 421 Worthington Ave., Harrison, N. J.

FORD CONVERSIONS AND PARTS

*Osclo Motors Corp., 3648A No. Lawrence St., Philadelphia, Pa.

Gasoline Engines

*Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.

ENGINE DEALERS

*H. O. Penn Machinery Co., Inc., East River and 140th St., New York, N. Y.

*Perkins-Eaton Machinery Co., 376 Dorchester Ave., South Boston 27, Mass.

*Southworth Machine Co., 30 Warren Ave., Portland, Me.

EXHAUST SILENCERS

John T. Love Welding Co., Walen's Wharf, Wharf St., Gloucester, Mass.

FISHING GEAR

*Westerbeke Fishing Gear Co., Inc., 279 Northern Ave., Boston, Mass.

FISH MEAL MACHINERY

Enterprise Engine & Foundry Co., Process Machinery Div., 18th and Florida Sts., San Francisco, Calif.

FISH SCALERS

Portable, Flexible Shaft
N. A. Strand & Co., 5001 N. Wolcott Ave., Chicago, Ill.

FLOATS

J. H. Shepherd Son & Co., 1820 East Ave., Elyria, Ohio.

FOG HORNS

*Clark Cooper Co., 319 N. Market St., Palmyra, N. J.

L. D. Lothrop Sons, Gloucester, Mass.

FUEL GAUGES

*The Liquidometer Corp., Marine Division, Skillman Ave. at 37th St., Long Island City, N. Y.

HOOKS, FISH

*Bill DeWitt Baits, Hook Mfrs., Auburn, N. Y.

ICE BREAKERS

*Gifford-Wood, Hudson, N. Y.

ICE PICKS

*Chas. D. Bridell, Inc., Crisfield, Md.

MARINE GLUE

W. A. Briggs Bitumen Co., 3309 Richmond St., Philadelphia 34, Pa.

NAUTICAL INSTRUMENTS

*Kelvin-White Co., 90 State St., Boston, Mass.

*Raytheon Mfg. Co., Industrial Electronics Div., Waltham 54, Mass.

Sperry Gyroscope Co., Inc., Great Neck, N. Y.

NETS AND NETTING

W. A. Augur, Inc., 35 Fulton St., New York, N. Y.

*R. J. Ederer Co., 540 Orleans St., Chicago, Ill. The Fish Net & Twine Company, 310-312 Bergen Ave., Jersey City, N. J.

*The Linen Thread Co., Inc., 105 Maplewood Ave., Gloucester, Mass.

A. M. Starr Net Co., East Hampton, Conn.

OILED CLOTHING

*H. M. Sawyer & Son Co., East Cambridge, Mass.

OIL FILTERS

Hamilton Engineering Co., P. O. Box 1893, Boston, Mass.

OILS

Gulf Oil Corp., Gulf Bldg., Pittsburgh, Pa.

MacMillan Petroleum Corp., 530 W. 6th St., Los Angeles 14, Calif.

OYSTER KNIVES, TONGS

*Chas. D. Bridell, Inc., Crisfield, Md.

PRESERVATIVES

*Samuel Cabot, Inc., 1140 Milk St., Boston 9, Mass.

"Campbell's Copper Compound": International Chain & Mfg. Co., York, Pa.

PAINTS

*International Paint Co., Inc., 21 West St., New York, N. Y.

*Pettit Paint Co., Belleville, N. J.

PROPELLERS

*Columbian Bronze Corp., Freeport, N. Y.

Federal-Mogul Marine Div., 4033-91 Beaufait Ave., Detroit, Michigan.

*Hyde Windlass Co., Bath, Me.

*Michigan Wheel Co., Grand Rapids, Mich.

PUMPS

*The Edson Corp., 49 D Street, South Boston, Mass.

Jabsco Pump Co., 8302 Wilshire Blvd., Beverly Hills, Calif.

Marine Products Co., 6636 Charlevoix Ave., Detroit 7, Mich.

RADIO DIRECTION FINDERS

*Bludworth Marine, 100 Gold St., New York 7, N. Y.

*Kaar Engineering Co., 611-619 Emerson St., Palo Alto, Calif.

RADIO TELEPHONES

The Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.

Jefferson-Travis Radio Mfg. Corp., 245 East 23rd St., New York 10, N. Y.

*Kaar Engineering Co., 611-619 Emerson St., Palo Alto, Calif.

Radiation Products, Inc., Dept. 20, 1142 Wall St., Los Angeles 15, Calif.

RANGES

"Shipmate": Stamford Foundry Co., Stamford, Conn.

REVERSE AND REDUCTION GEARS

*Snow-Nabstedt Gear Corp., Welden St., Hamden, Conn.

Twin Disc Clutch Co., 1341 Racine St., Racine, Wis.

*G. Walter Machine Co., 84 Cambridge Ave., Jersey City, N. J.

RUBBER BOOTS

*U. S. Rubber Co., 1230 Sixth Ave., New York 20, N. Y.

RUBBER CLOTHING

*H. M. Sawyer & Son Co., East Cambridge, Mass.

*U. S. Rubber Co., 1230 Sixth Ave., New York 20, N. Y.

SEAFOOD TOOLS

*Chas. D. Bridell, Inc., Crisfield, Md.

SHIPBUILDERS, BOATYARDS

Bethlehem Steel Co., Shipbuilding Division, Bethlehem, Pa.

*Delaware Bay Shipbuilding Co., Inc., Leesburg, N. J.

*Liberty Dry Dock, Inc., Foot of Quay St., Brooklyn 22, N. Y.

*Marine Railway & Repair Co., South Portland 7, Maine.

John H. Mathis Co., Camden, N. J.

Frank L. Sample, Jr., Inc., Boothbay Harbor, Me.

*Southwest Boat Corp., Southwest Harbor, Me.

*Sturgeon Bay Shipbuilding & Dry Dock Co., Sturgeon Bay, Wis.

STEERING GEAR

*The Edson Corp., 49-51 D St., South Boston, Mass.

Sperry Gyroscope Co., Inc., Great Neck, N. Y.

STERN BEARINGS

*Hathaway Machinery Co., New Bedford, Mass.

TRAWLING EQUIPMENT

*Hathaway Machinery Co., New Bedford, Mass.

*New England Trawler Equipment Co., 301 Eastern Ave., Chelsea, Mass.

WIRE ROPE

*Bethlehem Steel Co., Bethlehem, Pa.

When You Ship FISH, LOBSTERS or SCALLOPS to the Boston Market FOR BEST RESULTS SHIP TO
R. S. HAMILTON COMPANY

On the Boston Market over 30 Years
17 Administration Building Fish Pier, Boston, Mass.

Marine Bargains

Fishing Smack 49' x 12' x 5', rebuilt 1943, gas powered, fine condition, priced low. Draggers: 50' x 15.4' x 5', new 1942, 110 hp. Gray Diesel, ices 36,000 lbs. 60' x 20' x 7', rebuilt 1940, 150 hp. Fairbanks-Morse Diesel new '42, ices 50,000 lbs. 61.5' x 17' x 7', built 1945, 171 hp. Buda, ices 55,000 lbs. 73' x 17' x 8', 180 hp. Fairbanks-Morse, ices 70,000 lbs., launched December 1945 and many others—all in commission. Gas engines, rebuilt: 40 hp. Lathrop with elec. starter, like new, 80 hp. Red Wing Big Chief, 4 cyl. Chrysler Crown 2 1/2 to 1 red. gear. Lathrop Model LH-6, 65 hp. Diesel engines, rebuilt: 80 hp. Fairbanks-Morse, 4 cyl. 3 to 1 reduction, Superior MRD-8 150-230 hp., new '39. F-M, 160 hp. Model 35, rebuilt 1945. Superior MRA 6, 100 hp., reduction gear, and many others. FOR QUICK SALE—120 hp. Fairbanks-Morse 35 E, 8 1/4, new 1941, with sailing clutch, power take-off, prop. outfit, aux. air plant, aux. generator, aux. pumps—guaranteed, \$5,300. f.o.b. Knox Marine Exchange, Camden, Maine.

For Sale

One completely rebuilt 60 hp. heavy duty Atlas Diesel engine in A-1 condition. Price reasonable for quick sale—Address Box "A", Atlantic Fisherman, Goffstown, New Hampshire.

Dragger For Sale

55'6" dragger for sale, 17' beam, 7' draft. 80 hp. Lathrop Diesel, 2:1 Twin Disc reduction. Capacity 30,000. Telephone Montauk Point, N. Y. 2493.

Trawler For Sale

For sale, trawler, fully rigged, now fishing, 56 ft. long, 16 1/2 ft. beam, powered with D13000 Caterpillar Diesel, built 1944. Reply P. O. Box 571, Fernandina, Fla.

Engine For Sale

80 hp. 6 cylinder Palmer—Model N196. Complete with electric starter, 12 volt battery; new, bilge pump generator, dual ignition, reverse gear—Excellent condition. Two new 2 1/2" stuffing boxes—12 ft. 2 1/2" bronze shaft, 38" x 28" wheel—Price \$1,250. Avery Boat Yard, Saunders Point, Niantic, Conn.

Boat For Sale

75 x 22 x 5 two masted centerboard oyster schooner—Sails two years old, in good condition—Very low price. Avery Boat Yard, Saunders Point, Niantic, Conn.

HEAVY DUTY MODELS
FOR COMMERCIAL
FISHING BOATS
Write for Free Catalog



GRAY MARINE MOTOR CO.
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231 S. Front St. — PHILADELPHIA, PA. — 230 S. Water St.

Index to Advertisers

Bethlehem Steel Co. (Wire Rope).....	Right
Bludworth Marine	fishermen
Chas. D. Bridgell, Inc.	only net
Samuel Cabot, Inc.	after ger
Caterpillar Tractor Co.	Control
Chrysler Corp.	attention
Columbian Bronze Corp.	the selec
Columbian Rope Co.	bale. Th
Clark Cooper Co.	then go
Cooper-Bessemer Corp.	ourselves
Cummins Engine Co.	twine. W
R. S. Danforth	to reach
Delaware Bay Shipbuilding Co., Inc.	content
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R. J. Ederer Co.	right? na
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Hathaway Machinery Co.	That's n
Hyde Windlass Co.	been ma
International Paint Co., Inc.	years. A
Kaar Engineering Co.	had not
Kelvin-White Co.	promise,
Kermath Mfg. Co.	century
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The Linen Thread Co., Inc.	back in
The Liquidometer Corp.	So for th
Lister-Blackstone, Inc.	wisely—
Marine Railway & Repair Co.	netting &
Michigan Wheel Co.	catches,
Murphy Diesel Co.	OTH
The National Supply Co.	AND
New Bedford Cordage Co.	Med
New England Trawler Equipment Co.	Gold
Oscor Motors Corp.	Twin
Palmer Bros. Engines, Inc.	ple
H. O. Penn Machinery Co., Inc.	
Perkins-Eaton Machinery Co.	
Pettit Paint Co., Inc.	
Raytheon Mfg. Co.	
H. M. Sawyer & Son Co.	
R. H. Sheppard Co.	
Snow-Nabstdt Gear Corp.	
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Southworth Machine Co.	
Sturgeon Bay Shipbuilding & Dry Dock Co.	
U. S. Rubber Co.	
G. Walter Machine Co.	
Westerbeke Fishing Gear Co., Inc.	
Wolverine Motor Works Inc.	

Where to Ship in New York

Beyer Fish Co., Fulton Fish Market

International Fish Co., 111 Fulton Fish Market

Lester & Toner, Inc., Fulton Fish Market

South Fish Co., 31 Fulton Fish Market

Frank W. Wilkisson, Inc., 16 Fulton Market

This time let's read

the footnote first!

Right there are the "BIG THREE" reasons why so many netting-wise fishermen make GOLD MEDAL their only netting, year after year, generation after generation.

Controlled Production—the personal attention to every detail, beginning with the selection of the cotton right in the bale. The carefully-chosen raw cotton then goes right into our plants where we ourselves spin the yarn and twist the twine. We've taken three control steps to reach the point where others are content to begin!

No other netting company—that's right! no other goes that far to make sure you catch and hold all the fish that are coming to you. That's point number two.

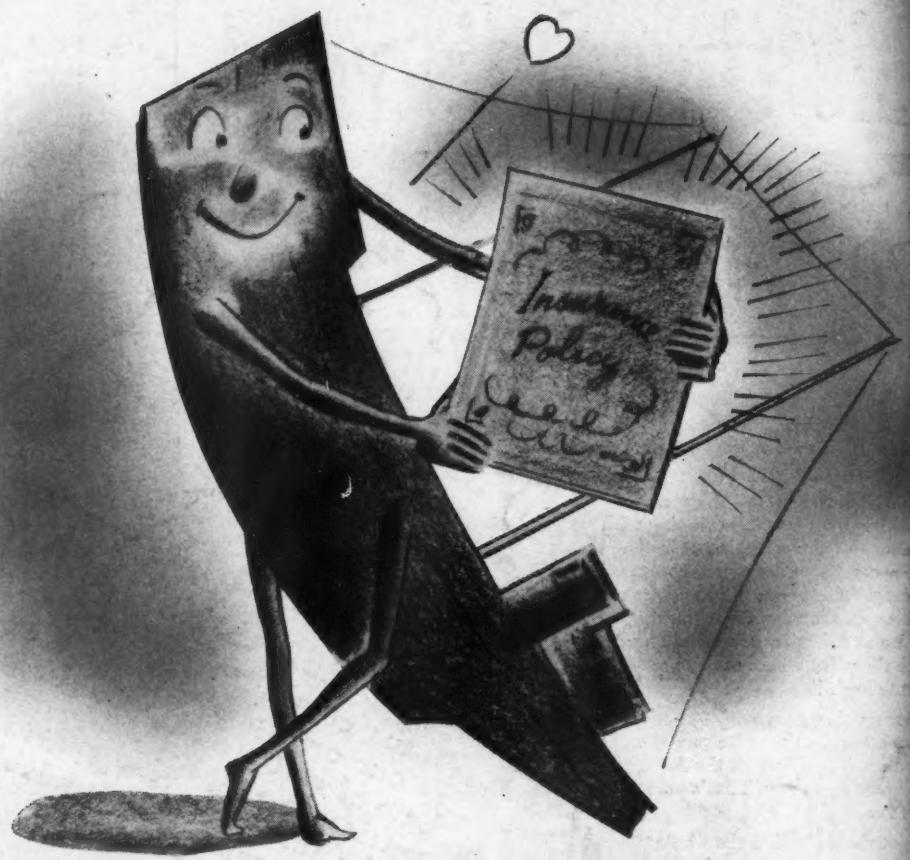
And point three clinches the whole thing—**The greatest name in netting**. That's more than a boast. We've been making netting for 104 years. And if Gold Medal Netting had not delivered full value for every promise, it wouldn't take over a century for practical men like yourself to drop on to that fact! We're proud we've earned the confidence and respect of the industry since 'way back in great grandfather's day. So for these three good reasons, buy wisely—order GOLD MEDAL netting for fewer headaches, surer catches, more good take-home money.

OTHER NETTING PRODUCTS:
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Medal Sea Island Cotton Gill Netting
Gold Medal Hanging and Mending
Twines • Plymouth Rope • A complete
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FOR 104 YEARS





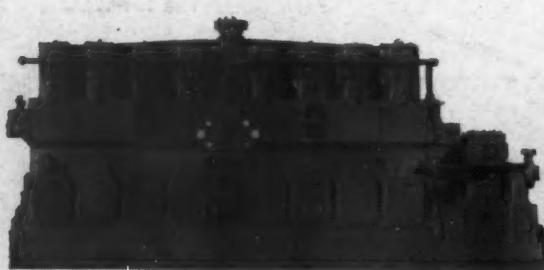
Health Insurance for Fishing Boats

THREE'S a good way to insure the health of that new fishing boat you're planning. This protection, effective for years, won't cost you a cent. In addition, you'll have full coverage on your boat's ability to take unexpectedly tough jobs in stride . . . without symptoms of pain!

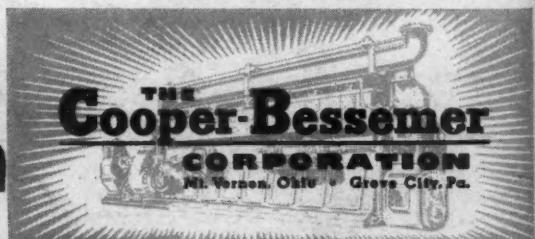
This health insurance is one of the plus values you get when you install a Cooper-Bessemer diesel. Included are such benefits as Meehanite Metal for greater strength . . . unique, controlled-pressure

fuel injection for economy and smooth operation at all speeds . . . turbu-flow oil cooling of pistons . . . modern, thin-wall precision-type bearings . . . high-pressure lubrication . . . abundant reserve power for emergencies . . . and a raft of other benefits just as desirable.

They all add up to the best possible insurance for your Cooper-Bessemer powered fishing vessel to stay healthy for years, always giving you top line performance.



One of six Cooper-Bessemer marine diesel types, available atmospheric or supercharged up to 1,800 horsepower.



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